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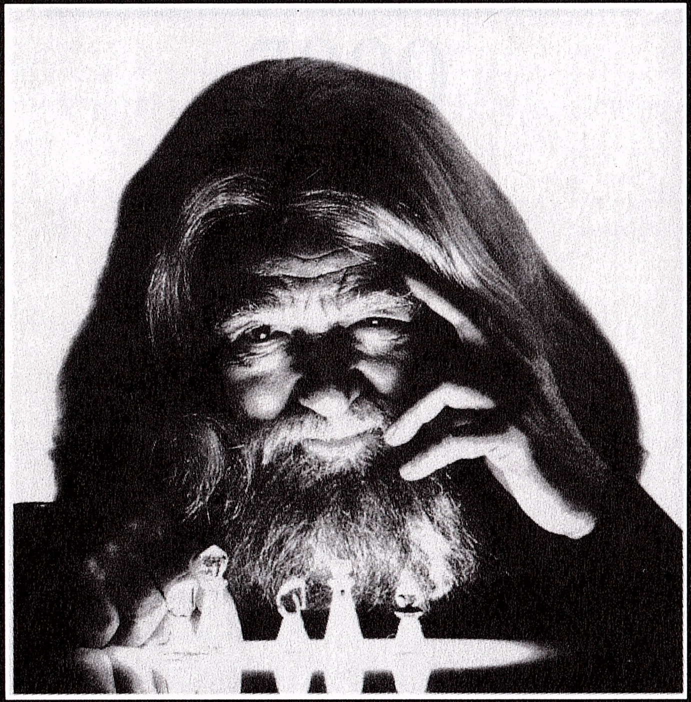
OWNERS MANUAL

THE CHESSMASTER® 3000



"Chess, like music, like love, has the power to make people happy."

Dr. Siegbert Tarrasch

THE CHESSMASTER®
3000

Owner's Manual

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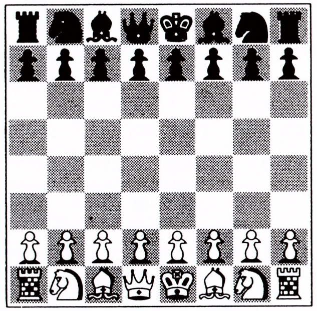
LET'S PLAY CHESS

Chess is a game for two players, one with the "White" pieces and one with the "Black" – no matter what colors your set actually uses. At the beginning of the game, the pieces are set up as pictured below. (See the following diagrams to identify pieces.)

These hints will help you to remember this setup:

1. Opposing Kings and Queens go directly opposite each other.
2. The square in the lower right corner is a light one ("light on right").
3. The White Queen goes on a light square, the Black Queen on a dark square ("Queen on color").

The main goal of chess is to checkmate your opponent's King. The King is not actually captured and removed from the board like other pieces. But if the King is attacked ("checked") and threatened with capture, it must get out of check immediately. If there is no way to get out of check, the position is a checkmate, and the side that is checkmated loses.



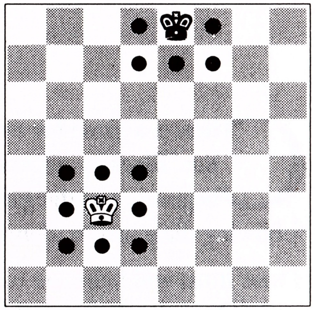
The Pieces

White always moves first, and then the players take turns moving. Only one piece may be moved at each turn (except for "castling," a special move that is explained later). The Knight is the only piece that can jump over other pieces. All other pieces move only along unblocked lines. You may not move a piece to a square already occupied by one of your own pieces. But you can capture an enemy piece that stands on a square where one of your pieces can move. Simply remove the enemy piece from the board and put your own piece in its place.

The King

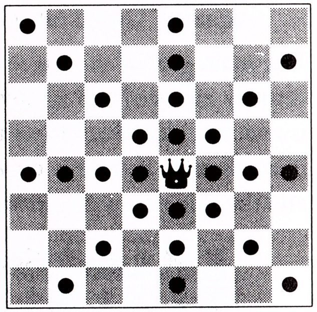
The King is the most important piece. When he is trapped, his whole army loses. The King can move one square in any direction—for example, to any of the squares with dots in this diagram. (An exception is castling, which is explained later.)

The King may never move into check—that is, onto a square attacked by an opponent's piece.



The Queen

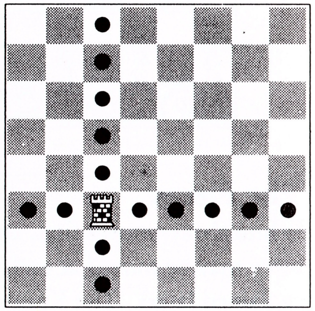
The Queen is the most powerful piece. She can move any number of squares in any direction—horizontal, vertical or diagonal—if her path is not blocked. She can reach any of the squares with dots in this diagram.



The Rook

The Rook is the next most powerful piece.

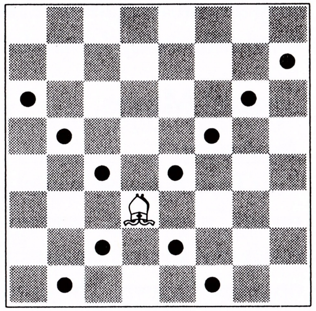
The Rook can move any number of squares vertically or horizontally if its path is not blocked.



The Bishop

The Bishop can move any number of squares diagonally if its path is not blocked.

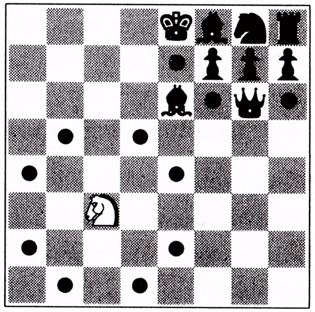
Note that this Bishop starts on a light square and can reach only other light squares. At the beginning of the game, you have one "dark-square" Bishop and one "light-square" Bishop.



The Knight

The Knight's move is special. It hops directly from its old square to its new square. The Knight can jump over other pieces between its old and new squares.

You can think of the Knight's move as an "L." It moves two squares horizontally or vertically and then makes a right-angle turn for one more square. The Knight always lands on a square opposite in color from its old square.

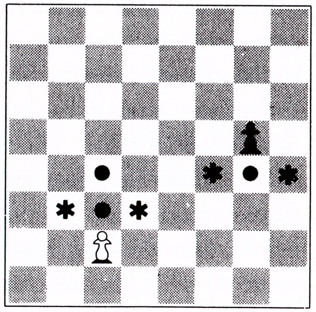


Any pieces "hopped over" are not captured by the Knight. The Knight can capture only when "landing" on the enemy piece.

The Pawn

The Pawn moves straight ahead (never backward), but it captures diagonally. It moves one square at a time, but on its first move it has the option of moving forward one or two squares. (This option was introduced to speed up the game.)

In the diagram, the squares with dots indicate possible destinations for the pawns. The White pawn is on its original square, so it may move ahead either one or two squares. The Black pawn has already moved, so it may move ahead only one square now. The squares on which these pawns may capture are indicated by an *.

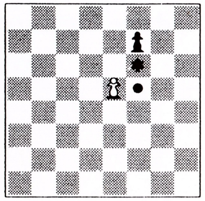


If a pawn advances all the way to the opposite end of the board, it is immediately "promoted" to another piece, usually a Queen. It may not remain a pawn or become a King. Therefore, it is possible for each player to have more than one Queen or more than two Rooks, Bishops, or Knights on the board at the same time.

As soon as a pawn is "promoted" it has all the powers of its new self (though it may not move again on that turn). For example, a pawn may become a Queen that immediately "gives check" to the opponent's King.

Special Moves

En Passant



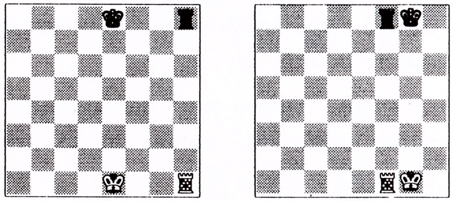
This French phrase is used for a special pawn capture. It means "in passing," and it occurs when one player moves a pawn two squares forward to try to avoid capture by the opponent's pawn. The capture is made exactly as if the player had moved the pawn only one square forward.

In the diagram above, the Black pawn moves up two squares to the square with the dot. On its turn, the White pawn may capture the Black one on the square marked with the i. If the White player does not exercise this option immediately—before playing some other move—the Black pawn is safe from "en passant" capture for the rest of the game. But new opportunities arise with each other pawn in similar circumstances.

Castling

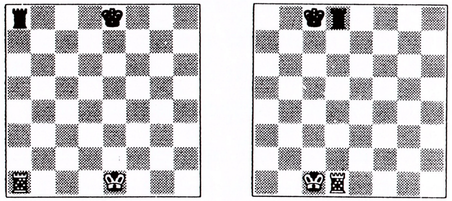
Each player may "castle" once during a game if certain conditions are met. Castling is a special move that lets a player move two pieces at once—his King and one Rook. In castling, the player moves his King two squares to its left or right toward one of his Rooks. At the same time, the Rook involved goes to the square beside the King and toward the center of the board (see illustrations at right). In order to castle, neither the King nor the Rook involved may have moved before. Also, the King may not castle out of check, into check, or through check. Further, there may not be pieces of either color between the King and the Rook involved in castling.

Kingside Castling



Before *After*

Queenside Castling



Before *After*

Castling is often a very important move because it allows you to place your King in a safe location and also allows the Rook to become more active.

When the move is legal, each player has the choice of castling Kingside or Queenside or not at all, no matter what the other player chooses.

More About Check and Checkmate

Now that you know how the pieces move, you can understand more about check and checkmate. Your opponent is trying to checkmate your King, and you must avoid this situation if possible.

You may not move into check—for example, move into a direct line with your opponent's Rook if there are no other pieces between the Rook and your King. Otherwise, the Rook could "capture" the King, which is not allowed.

If you are in check, there are three ways of getting out:

1. Capturing the attacking piece;
2. Placing one of your own pieces between the attacker and your King (unless the attacker is a Knight);
3. Moving the King away from the attack.

If a checked player can do none of these, he is checkmated and loses the game.

If a King is not in check, but that player can make no legal move, the position is called a stalemate and the game is scored as a draw, or tie.

Some Hints to Get You Started

Some pieces are more valuable than others, because they are able to control more squares on the board. Obviously, for example, a Queen is more valuable than a pawn.

The question of value is important every time there is a possibility of capturing or exchanging pieces. Following is a guide to the value of the pieces other than the King:

Pawn	1 point
Knight	3 points
Bishop	3 points
Rook	5 points
Queen	9 points

There are also some general principles that will help you to win games. After you practice for a few games, you will find that you are following these hints naturally, and that you do not have to work at remembering them.

- Try to capture more valuable pieces than your opponent does. The player with stronger pieces has better winning chances.
- Capture more valuable pieces with less valuable ones.
- Don't try for a checkmate in the first few moves—it probably won't work.
- Control the center. Pieces in the center have more mobility than pieces on the wing. (Look back at the Knight diagram and see how the White Knight has more possible moves than the Black one.) Move your center pawns early, but not the pawns on the side.
- Move your Knights and Bishops early.

- Castle early.
- Every time your opponent moves, stop and look carefully. Did he attack one of your pieces? Can you defend it or save it from capture? Did he make a move that allows you to capture something?
- Be alert. Your opponent has a plan too!
- Get all your pieces into good positions and protect your King before trying to attack. It takes more than one piece to checkmate.

Getting Better

These basic rules and pointers are enough to get you started in chess. Now you are ready to find partners among the millions of chess lovers across the country and around the world.

Practice will make you better and better at the game and so will reading some of the countless books about chess. You can probably find some of these books at your local library or bookstore. They will tell you a lot about various winning strategies.

Another source for all your chess needs is the U.S. Chess Federation, a not-for-profit educational and instructional corporation and the official organizing body for chess in the country. U.S. Chess publishes the monthly magazine Chess Life, containing news, instruction, other articles about chess, and a monthly list of tournaments that even beginners may play in.

U.S. Chess also offers a national rating system, postal chess competitions, and a mail-order department with a large selection of chess books and equipment.

For more information about U.S. Chess and how to join, write to:

U.S. Chess Federation
186 Route 9W
New Windsor, NY 12550
Telephone: (914) 562-8350

A HISTORY OF CHESS

The invention of chess has been variously ascribed to the Arabians, Babylonians, Castilians, Chinese, Egyptians, Greeks, Hindus, Irish, Jews, Persians, Romans, Scythians and Welsh. Specific individuals have sometimes been credited—the Greeks claimed Aristotle invented chess—but no invention stories are reliable. We can make a few deductions, however, from what is known.

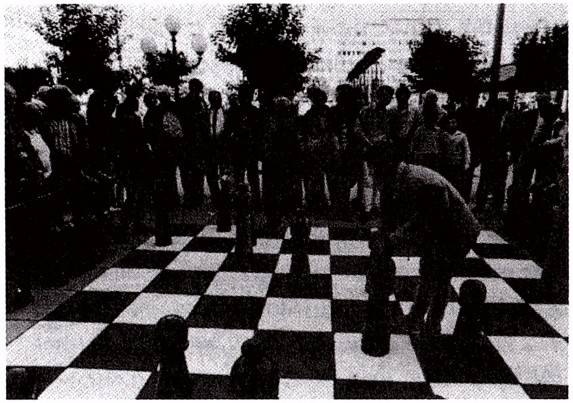
The oldest name for chess is *chaturanga,* a Hindu word referring to the four branches of the Indian army, elephants, horses, chariots and foot soldiers, which were not in existence after the birth of Christ. Therefore, chess is at least 2,000 years old. Its exact age can't be determined with any degree of accuracy, because it was originally played with dice and references to "skilled dice players" as long as 5,000 years ago may or may not refer to early forms of chess. The ambiguity is due at least in part to the Indian *ashtapada,* the forerunner of the modern chessboard. It has been used for various games, most of which involved dice. The Hindus didn't stop with two-player chess, either. They even developed a four-handed version, with and without dice, in which each player had eight pieces. The diceless four-handed version is still played in India. Indian rules varied greatly from place to place, and as the game spread eastward, its rules were altered to suit local tastes. The Burmese, for instance, start their game with the Kingside pawns on the third rank and the Queenside pawns on the fourth rank. Before any movement begins, the major pieces are located anywhere behind the pawns according to the tactical discretion of the individual player. The moves today are identical to the original Hindu chess moves. The Chinese place their pieces on the intersections of the lines rather than on the squares and add a *celestial river,* akin to no-man's land, between halves of the board. Their version has only five pawns to a side, but adds two *cannons* ahead of the Knights, and a *counselor* on either side of the King. In China, the King is called the *general* because a Chinese emperor was so insulted at seeing a figure of himself in a lowly game that he had the players executed! In order to play the game without undue risk of life and limb, Chinese players demoted the piece on the board—or so the story goes. Interestingly, the Japanese allow captured pieces to change sides and rejoin the game against their old army at any vacant place on the board.

The Persians learned chaturanga from the Indians, corrupting the name of shatranj, and codifying its rules. They spread a consistent game to the rest of the world, along with the idea that the rules ought to be uniform. Since the Persians took up chess, there have been rule changes, but each change was adopted universally throughout the West. Chess spread very rapidly in the Persian

Empire. The Persians never took to the four-handed game, and looked down on dice-chess. The latter did spread to Europe via the Moslems, where it persisted until the 14th century. The Moslems most likely learned dice-chess direct from the Hindus.

The Persian Empire fell to the Moslems in the seventh century, and chess became very popular in the Moslem world. At least, it did after their theologians decided that chess playing wasn't contrary to the teachings of Mohammed. This decision took about one hundred years and illustrates the curious power a simple game can have: four generations of chess players weren't quite sure that they were in good standing with their religion because of a pastime. After the official decision that there was no harm in chess, the Moslems created a greatly detailed literature about it.

Chess may have arrived in Russia as early as the eighth century, about a hundred years before it reached Western Europe. That eighth-century Russians traded with the Arabs is not in dispute, and people who traded with the Arabs around that time tended to learn chess. By 1000 A.D., Christianity was established in Russia, and the church there immediately made a concerted and unsuccessful effort to discourage chess playing. 16th century travelers to Russia reported that people of all classes played chess there. In the rest of Europe, chess playing was a game of the nobility until the 18th century. When the Mongols invaded Russia, they brought their own form of chess with them. The Mongols had gotten chess via the Eastern route, so they had a number of their own variations. As a result, in certain parts of Russia, the modern rules did not take hold until the 20th century.



Children in Piraeus, Greece playing street chess at Christmastime. Similar pageants are held throughout Europe.

It is through the Moslems that Europeans learned chess and most chess nomenclature. The Persian chatrang was rendered by the Moslems as *shatranj.* The Spanish names *axedrez* or *ajedrez* (ah-hey-dres), and Portuguese *xadrez* (sha-dres), obviously derive from shatranj. "Chess" in English conforms to the pattern throughout the rest of Europe: it is the vernacular corruption of scac, the 9th century Latin rendering of the Persian *shah,* or King. The King itself is always a direct translation of shah, and the pawn is invariably the equivalent of the Arabic

baidaq, or foot soldier. "Rook" is a direct corruption of *rukh,* or chariot. Interestingly enough, *rukh* was misinterpreted by the Bengalis as the Sanskrit *roca,* or boat. As a result, in certain parts of the East and Russia, this piece is in the shape of a boat. Our castle-shaped pieces come from the Farsi Indian pieces which represented the tower carried by an elephant. The Knight was originally *faras* in Arabic, meaning horse, the usual shape of the piece. In Europe, the name of the horse evolved to the name of its rider, Knight in English.

The Bishop evolved from the Arabic *al-fil,* or elephant. The Spanish still call this piece *alfil,* and the Italians are close with *alfiere,* standard-bearer. In England, the split at the top of the piece, intended to represent the elephant's tusks, was probably mistaken for a Bishop's miter. The French took the same split as a fool's hat, so in France the piece is *fou,* or jester.

The present-day Queen, so called throughout the West, started as the *counselor,* or *farz* or *firz.* The Spanish rendered this as *firz* or *alfferza,* and the Italians as *farzia* or *fercia.* The French made that into *fierce, fierge* and *vierge* (virgin), which may be how the gender change got started.

Europe's introduction to chess probably came in the ninth century, first in Italy and Spain. From Italy it spread to southern Germany and Switzerland. From Spain it went to France. The English may or may not have known chess before the Norman Conquest. Early references are confusing due to the tendency of the chroniclers of the period to refer to any and all games as "chess."

By the late Middle Ages, Europeans and Moslems had started tinkering with the rules. In the 13th century, we find the first known instance of the chessboard with its now-familiar light and dark squares. 15th century Mohammedan documents note that the Great Mogul Timor played "Great Chess," a version which required a board measuring ten by eleven squares.

Meanwhile, Europeans were frustrated by the amount of time it took to complete a game, and typically, made some rule changes designed to speed things up. In shantraj, the Bishop could originally move only two squares diagonally, but he could leap over a piece blocking his path. The Queen, or counselor at the time, was easily the weakest piece on the board, moving only one diagonal square per turn. When a pawn reached the eighth rank, it could only be promoted to counselor, the lowest promotion possible and the only way the former pawn could remain in the game.

When the counselor became today's Queen, an upsetting dilemma arose in the mind of the fifteenth century nobles: aside from the mental gymnastics required by the pawn's sex-change, what if the player's original Queen were still on the board? Would the King be a bigamist? When people took their royalty seriously this was a real problem. So for a while, a pawn could be promoted to a Queen only if the original had been captured. Later, of course, this solicitude on behalf of the royal marital status was abandoned; the Queen was too powerful a piece to be lost through fastidiousness. The players, however, did retain the option of promoting a pawn to any piece except a King.

Given the offensive might of the newly strengthened Bishops and Queens, something had to be done to help the defense. The King had become too easy to capture. The answer was castling. At first, the move allowed some flexibility. A King could jump two or three spaces, to g2 if he chose. This somewhat unsettled state of affairs finally became the modern castling move.

At about this time, pawns were first given the option of a two-square advance for their initial move. So that this new move could not be used to evade an enemy pawn, the *en passant* capture was devised. With these rule changes, the modern game of chess emerged, and there have been no other alterations since the 16th century.

Interestingly, in the 1920s, then world champion José Capablanca proposed the addition of two new pieces. The *chancellor* would move like a Rook or a Knight at the player's option, and the *archbishop* would move like a Bishop or Knight. These pieces would require two more pawns and a larger board, but supposedly had the effect of cutting playing time in half. Capablanca's suggestions were not acted upon.

WORLD CHAMPIONS AND THEIR PLAY

When William Steinitz beat Adolf Anderssen in 1866, Steinitz designated himself "World Champion." Since before that time no one had thought of calling himself that, Steinitz can, with some justification, be called the first world champion. However, most chess authorities have traced the world championship back at least to Francois Philidor, the French champion regarded in 1749 as the leading authority on chess. Certainly one can follow a more-or-less unbroken line of champions back to Philidor, but why not go back a little further? A number of "unofficial" champions can be traced back to the beginnings of the game. Each of them stood above his contemporaries, and in some way added to our common store of understanding.

There are many breaks in the record, but the first person to bestow upon himself the mantle of unquestioned master of the game of chess was the 10th century Arab *Grandee,* as-Suli.

The extensive Arab chess literature records four of the earliest known chess masters. Al-Adli, from the Byzantine Empire, was the first person reputed to be able to beat anyone he played, although just before his death the champion lost to a Persian known as ar-Razi at the court of Caliph al-Mutawakkil in 847 A.D.

As-Suli entered the picture about 60 years later in Baghdad. He established the first rating system for chess players. Grandee was the highest position, which as-Suli bestowed posthumously on al-Adli and ar-Razi, and which he claimed for himself. The next position was held by players able to beat a Grandee in two out of ten games when given the advantage of a pawn. Below that were grades which were defined by the player's ability to beat the Grandee with the advantage of a Bishop, Knight and Rook, respectively. Players who needed better odds than that were ranked "beneath contempt."

As-Suli's writings on chess provide us with some interesting insights as to what champion-level play was like then. He noted, for instance, that a Grandee could calculate ten moves ahead. Modern chess masters, with a far different array of pieces, seldom have to make such extensive calculations. As-Suli also felt the need to point out to his readers that while they position their men for attack in the first 12 to 19 moves, they would do well to pay attention to the disposition of their opponent's forces and perhaps respond accordingly.

As-Suli's play and reputation were so overpowering they were honored through six centuries of Arab chess literature. One of his pupils, al-Lajlaj, another

Grandee, was the first to note that the fewer moves a player needs to complete development of his pieces, the better off he is. Records from this period document the first instances of blindfold play.

Few games survive from this era, and those that do are rather tedious. With the lesser attacking power of the "Queen" and "Bishop," games were rarely won by checkmate; more common was the old rule of win by "baring"—capture of all the opposing pieces. The most interesting survivals from this era are problems and studies. Those involving Rooks and Knights, whose moves have not changed, are still worth a look.

World Champion Gary Kasparov, who has defended his title successfully in 1988 and 1991.

With the development of the modern game in the late 1400s, a new chess literature arose. The first Western chess author of whom we have a record is Luis Ramirez de Lucena, whose name has rather unfairly been attached to a poor opening[1] (1. e4 e5 2. Nf3 f6) which he counseled against. In 1497, Lucena wrote *Repiticion de Amores e Arte de Axedres.* Lucena was far from a master; he appears to have confused the new rules with some of the old and had some ideas on strategy worthy of a card shark. Lucena suggested that players position the board so their opponent's eyes were in the sun and try to arrange games after their opponent had eaten a large meal and had several drinks.

One of the first strong European players to emerge was the Spanish clergyman, Ruy Lopez, after whom the most popular of opening for centuries(1. e4 e5 2. Nf3 Nc6 3. Bb5) is named. His matches with Giovanni Leonardo and Paoli Boi in 1574–75 marked the first recorded serious chess competition.

Lopez wrote a very influential book on chess play, *Libro de la Invencion Liberal y arte del Juego del Axedrez (Book of the Liberal Invention and Art of Playing Chess).* He is known to have travelled extensively, playing chess wherever he went.

After Ruy Lopez, relatively few chess books appeared for about 170 years. This era is sometimes known as the "Heroic Age" of chess, as the strongest masters traveled about seeking the sponsorship of wealthy patrons. It is difficult to document this period; the surviving biographies of Leonardo and Boi include a plethora of magical charms, capture by pirates and poisonings by jealous rivals.

Leonardo, Boi and the next generation of powerful Italian masters, Alessandro Salvio, Giulio Polerio and Gioachino Greco, had made a number of advances over Lopez's work. However, because they played chess for money, they were understandably reluctant to give away their secrets by publishing books. What we know of their games comes from the private manuscripts they wrote and sold to wealthy patrons. Their games featured fast attack and sacrifice; gambits[2] were the preferred opening.

The culminating figure of this era was Gioachino Greco of Calabria (1600–c.1634). Greco's contribution to chess literature lay in his inclusion of complete games to illustrate his opening variations. Although probably fictitious, his games were lively and entertaining and had much to do with the persistence of his works; for the next century, chess books were often known generically as "Calabrians." Greco's manuscripts were written as notes for his student/patrons, and without the master's instruction made heavy sledding for the average player, but nothing better was to be found until Philidor.

Phillip Stamma, a Syrian, published his *Essay sur le Jeu des Echecs* in Paris in 1737, and a revised English version, *The Noble Game of Chess* in 1745, the first to feature algebraic notation. While in London as Interpreter of Oriental Languages to the English government, Stamma customarily played at Slaughter's Coffeehouse, and it was there that he lost a famous match to Francois Andre Danican Philidor (1726–95), a French composer of operas, some of which are still performed. As a result of the notoriety he gained at Slaughter's, and the subsequent classic he authored, Philidor became one of the most influential players who ever lived.

The scion of a musical family, Philidor showed an early interest in chess, but his serious involvement began in 1745, when a concert tour with which he was associated collapsed, leaving him penniless in the Netherlands. For the next few years he supported himself playing and teaching, and in 1749 he published his *L'analyse du jeu des Echecs.*

This book was something new in chess literature—an attempt to instruct the student in strategy and planning, in *how* to think rather than *what* to think. Unlike his predecessors', Philidor's illustrative games were selected not to dazzle, but to instruct. He felt that the greatest weakness of his contemporaries was an ignorance of correct pawn play—in his own phrase, *"Les pions sont l'ame du jeu."* ("The pawns are the soul of the game.")

Another chess book, written in 1763 by the Italian master Giambattista Lolli, presented a view more concerned with mobility, and therefore a more modern approach. It too featured extensive notes to games. Philidor's style held sway in France and England, though, for a very mundane reason—he couldn't be beaten.

Philidor's playing strength is difficult to judge, for there is no contemporary yardstick with which to measure him; he stood head and shoulders above the players of his time, and it is hard to find a recorded game at even odds. His ability to play three blindfold games simultaneously caused astonishment at the time. It seems clear that he could have achieved much more had he been challenged, but few other figures in chess history stood so far ahead of their time. After a long and successful career both as a chess master and a composer, Philidor's life ended on a dark note. After the French Revolution, his former royal patronage proved an embarrassment, and he died in exile in London in 1795.

The first of four consecutive French champions, Philidor created considerable interest in chess in France and England, and the center of the chess world was undoubtedly the Cafe de la Regence in Paris. Philidor was taught by Legal de Kermar, of whom little is known, and was succeeded by Alexandre Deschapelles, whose repute as a player is largely based on his intimidation of his opponents.

Deschapelles was a domineering and arrogant war hero whose play consisted of nothing more than a sustained effort to checkmate his opponent's King. He was interested neither in other lines of attack, nor in defense. Phrenology, a pseudo-science in vogue at the time, attempted to explain all human behavior by the shape of the head. Phrenologists believed that Deschapelles's highly developed prowess at chess was due to cranial saber wounds he had suffered in battle. For whatever reasons, Deschapelles was overpowering. He gave a pawn-and-two-moves advantage[3] to anyone who played him and liked to brag that he had never been beaten in an even game. While true as far as it goes, his statement is misleading: when his pupil, Charles La Bourdonnais, was finally able to beat him with the customary odds, Deschapelles gave up the game rather than risk losing at no odds.

The third in line of French champions, La Bourdonnais was one of those natural chess players whose moves come after only seconds of thought. He had the misfortune to have as his principal opponent Alexander McDonnell, an Irishman, champion of the British Isles, and an agonizingly slow player.

The 1834 match between La Bourdonnais and McDonnell—really a series of five matches encompassing 84 games—was a milestone in chess in more ways than one: a formal encounter between two masters of comparable strength, in which all the games were recorded, published and studied. (See Classic Games 2 and 3.) The record indicates that La Bourdonnais was driven almost to distraction by the glacial pace of McDonnell's play. Neither man gave a thought to defense; attack was everything in their games. The Frenchman clearly proved his superiority with an overall score of 44 wins, 27 losses and 13 draws.

From a modern perspective, McDonnell was a strong player typical of his time, a fierce attacker who somewhat overvalued the initiative. La Bourdonnais, though an equally gifted combinative player, had a grasp of position play rather ahead of his time; he valued central pawns, fought for central squares, and understood play both with and against an isolated central pawn, concepts which were not to be emphasized until the time of Steinitz.

After founding the first chess journal, *La Palamède*, La Bourdonnais moved back to England and died there in 1840. He was buried near McDonnell, who died in 1835.

La Bourdonnais's successor in France was Pierre de Saint-Amant, the last of the great French masters. McDonnell's was Howard Staunton (1810–1874). In 1843, Staunton, who had lost a first match to Saint-Amant by one game, won their second 11–6, with 4 draws. Taking his cue from Deschapelles, Saint-Amant gave up chess after this loss. Staunton declared himself champion, and although he later beat Daniel Harrwitz and Bernhard Horwitz, two of Europe's strongest players, he also began the familiar champion's practice of avoiding anyone appearing strong enough to beat him.

The Hungarian chess-playing Polgar sisters were the core of the first non-Soviet women champions in the Olympiad (1990), and compete frequently in major tournaments.

Staunton was a dominating figure in chess, both on and off the board. Though generally considered the best player in the world after his victory over Saint-Amant, his claim to fame does not really rest on his games; creatively, he was surely not the equal of La Bourdonnais before him or Morphy after. But as a journalist, promoter and patron, he changed the image of chess from that of a parlor game to that of a serious sporting contest. His 1849 design for chess pieces has proved to be the classic for play of the game. It is the one most familiar today, and the one you will see onscreen in *The Chessmaster 3000.* He founded the first successful chess magazine in English, *The Chessplayer's Chronicle,* in 1841, and wrote a chess column for the *Illustrated London News* from 1845 until his death. His books, *The Chess Player's Handbook* (1847) and *The Chess Player's Companion* (1849) were the primary sources of instruction for a generation of British and American players.

Staunton was also an acknowledged Shakespearian scholar in his day—a very busy man.

And in 1851 he organized the first international chess tournament on the occasion of the Great Exhibition of London. Each entrant had to pay his own way there and put up a five pound entry fee, but there was a £183 purse for the winner.

This landmark event bore little resemblance to the round-robin tournaments of today. Sixteen players representing most of the nations of Europe, at least twelve of whom were among the best in the world, competed in a series of knock-out matches. Of course, this meant that two of the favorites might meet early on, one of the reasons why this system soon became obsolete. Staunton himself was unexpectedly knocked out in the third round by Adolf Anderssen, (1818–1878) a professor of mathematics from Breslau. (See Classic Games 5 and 6 for examples of Anderssen's play.) He then suffered the ignominy of losing a playoff match for third place to his student, Elijah Williams. In writing about his loss to Anderssen, Staunton blamed the demands of organizing the affair and poor health, thereby setting another precedent, that of a champion blaming a loss on anything but the superior abilities of his opponent. Another of Staunton's excuses, physical exhaustion, did have at least a grain of truth in it. There was no time limit in effect then, and some games in the exhibition lasted longer than ten hours. However, Staunton's comments on anyone's play but his own were often unsportsmanlike, and he was not shy about voicing his complaints in his various press forums. For all his contributions to chess, Howard Staunton had a sorry reputation.

In any event, after the London 1851 tournament, Adolf Anderssen was generally acknowledged as the best player in the world (except perhaps by Staunton). He was challenged—and surpassed—only by the astonishing phenomenon of Paul Morphy.

Morphy (1837–84) is justly known as "the pride and sorrow of chess." He showed an early precocity, learning the game at eight by watching his father and uncle play.

Morphy was raised in New Orleans (which had an active chess club, thanks in part to Benjamin Franklin, who popularized the game in North America, founded the Philadelphia Chess Society and wrote an influential essay *Morals of Chess* in 1779). From the age of eight, Morphy played many games against the best players of New Orleans, and by the age of 13, he was clearly stronger than any of them.

At age 13, Morphy played two games with the expatriate Hungarian master, Johann Lowenthal, winning one game and drawing the second. Lowenthal wrote about the event, complimenting the youngster and predicting a great future in chess for him. Obtaining a law degree in 1857, Morphy found that he was not yet old enough to take the bar examination. Instead, he devoted himself to chess and walked away with the first American Chess Congress, held in New York. (See Classic Game 7.)

Morphy dominated his opponents for reasons they themselves did not fully understand. In calculating and combinative ability, he was at least the equal of the best of his rivals, but he had something more as well: an instinctive grasp of positional principles which would not be elucidated for another generation. Unlike his contemporaries, Morphy knew not only how to attack, but when as well. Anderssen commented, "There is no hope of catching Morphy in a trap." Morphy's attacks were more than traps. His style had a great effect on many later players who would sometimes ignore an easy advantage in favor of Morphyesque maneuvering. (See Classic Games 8 and 9 for other examples of Morphy's style of play.)

Shortly after Morphy won the New York tournament (the only tournament, by the way, in which he ever competed), the New Orleans Chess Club offered to pay Howard Staunton's expenses to come to America if he would play Morphy in a winner-take-all match with stakes of $5,000 a side. Staunton haughtily refused the offer, citing the amount of time a trip to the United States would take, the exhaustion the trip would entail and his own recent lack of play. Not only did he decline for himself, he also turned down the club on behalf of all Europe. Stung by Staunton's belittling of his abilities, and especially by an implication that he played chess professionally, Morphy sailed for England.

Although Staunton kept saying he looked forward to a match with Morphy, in fact he found excuse after excuse for not playing him. Morphy played Lowenthal again, while in England, this time beating him 9–3, with 2 draws. Morphy finally tired of waiting for Staunton and travelled to Paris to meet the best players of the Continent. There, in a highly publicized match, he beat Daniel Harrwitz, a great German champion who was very unpopular in France. The public was delighted by Morphy, who used the prize money from the Harrwitz match to pay Adolph Anderssen's fare from Breslau. While he waited for Anderssen to arrive, Morphy received a letter from Staunton. Essentially an admission that he couldn't beat the American, Staunton's letter was never made public. In fact, in his columns Staunton continued to claim that he was anxious to play Morphy, and that Morphy was avoiding him. When Anderssen arrived in Paris, Morphy beat him 7–2, with 1 draw. Anderssen generously complimented Morphy's abilities—in contrast to Staunton's notes on the match, which belittled the victor.

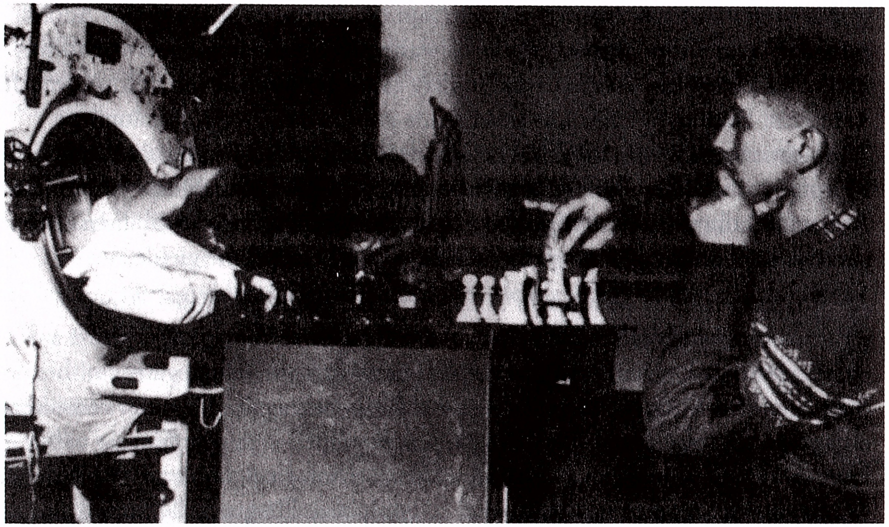
After a grand farewell banquet in London, which Staunton missed, Morphy returned to a hero's welcome in Boston and New York. For a year he wrote a chess column for a New York newspaper, but aside from private games with friends in New Orleans, he never played serious chess again. He never considered chess a professional career. But his legal practice failed—in part because of his fame as a chess player, in part because of his psychological problems which, while exaggerated in popular literature, were certainly real. He gradually became a recluse and died of a stroke in 1884.

In the 1860s and 70s, chess gradually assumed the form it has largely kept to this day. Tournaments were held regularly, and the introduction of the chess clock in 1876 ended the interminable ponderings of such players as Williams and Paulsen.

Because Morphy hadn't claimed the championship, Anderssen remained the man to beat. The "romantic" players of this era played a wide-open game featuring sacrifices, and Anderssen was particularly adept at spotting his opponent's weaknesses and then using a sacrifice to win. He successfully defended his championship two more times (his 1861 defense was the first to feature time limits on the moves), before losing to William Steinitz (1836–1900) 8–6 in 1866.

Steinitz, a native of Prague living in London, lost no time in claiming to be the world champion. He emigrated to the United States in 1883, and two years later founded *International Chess* magazine, which lasted until 1891. In his highly entertaining book, *Grandmasters of Chess,* Harold Schonberg calls Steinitz "the most unpopular chess player who ever lived," which is quite an accomplishment considering Staunton's record. Steinitz richly deserved the description, however. In addition to writing excellent commentaries on games, Steinitz used his magazine to indulge in the most vile mud-slinging imaginable against other masters, readers who had the misfortune to write to him and anyone else who managed to upset him. His repellent disposition aside, Steinitz, who had begun playing in the romantic style, made several important theoretical advances.

After a careful study of many games, Steinitz concluded that combinations did not arise from thin air—or, as his contemporaries might have said, from the genius of the master. Trained originally as an engineer, Steinitz reasoned, as Morphy had instinctively known a generation before, that combinations must arise from a positional advantage. Thus, an insufficiently prepared combination[4] must be unsound, and it should be possible to win by defense as well as attack. Steinitz also developed the theory of strong and weak squares. From these discoveries came the beginning of the scientific era of chess and the foundation of his 20-year reign. (See Classic Games 12, 19, 20, 21 and 24 for examples of Steinitz's play.)



15-year-old Bobby Fischer, then U.S. Champion, plays chess with a polio patient at a charity benefit.

Although he invariably took a high place when he competed, Steinitz played in few tournaments until his later years. Unlike most of his successors, however, he sought out and challenged his most dangerous rivals to matches, defeating Blackburne, Chigorin and Gunsberg. In 1886, playing Zukertort "for the World Chess Championship," according to the match contract, Steinitz fell four points behind before winning 10 games to 5, with 5 draws.

By 1894, Steinitz was getting on a bit in years, and with a new generation of players came a less exciting style of play. The strongest players had assimilated the Steinitz principles, and found it easiest to win against a weaker opponent by waiting for a positional error—a premature attack, surrender of the two Bishops or creation of a pawn weakness, for example. Among themselves, the top masters played "correctly" and were content to draw.

Emanuel Lasker (1868–1941) took another path. He recognized that error was an integral part of the game and played always to maintain the tension and place new problems before his opponent. He played a particularly psychological game, often ignoring the best objective move to make the one most disturbing to his opponent. His attack featured incredible complications which most players found impossible to comprehend. (For examples of Lasker's play, see Classic Games 17, 20, 23, 29, 30, 34, 37 and 44.)

Lasker, a native of Germany who had moved to the United States in 1890, finally defeated Steinitz in 1894. The match was played in New York for $2,000 a side, the winner being the first to take ten games. When Lasker won 10–5, with 4 draws, there was not too much surprise at his defeat of a player 32 years his senior. Steinitz wanted a rematch at once, but Lasker made him wait two years. When they met again in Moscow, Lasker won decisively 10–2, with 5 draws.

Lasker was the first champion to demand what were regarded at the time as astronomical stakes for a title match. Again, he drew a lot of criticism, but he usually held firm. Lasker did relent when he played Frank Marshall in 1907, halving his demand for $2,000 when Marshall was unable to raise it. Lasker won easily, beating Marshall 8–0, with 7 draws.

Lasker was a formidable player in tournaments, finishing below third place only once at the beginning and twice at the end of his career. His 78 percent score, spread over 30 years, was by far the best tournament record of his time. In matches he defeated Steinitz and Janowski twice, Marshall and Tarrasch, and was held to a draw only by the "drawing master" Carl Schlechter.

Lasker was continually criticized for his infrequent title defenses, but in all fairness, if the war years of 1914–1918 are omitted, he did defend his title an average of almost once every three years, the interval required by present-day international rules. He might have played more often had he not championed the unpopular opinion that a chess master should be well paid for his labors—an argument that continues today.

Lasker held the World Championship for 27 years. By 1921, though still in love with chess and with the struggle, he seemed tired of the title, and at last lost a match to a player as unlike him as any could be, the invincible Cuban, José Raul Capablanca (1888–1942).

Capablanca was a prodigy in the Morphy mold. He learned the game at the age of four, and in 1901 was strong enough to defeat Cuban champion Juan Corzo in a match. While attending Columbia University in New York, he often played at the Manhattan Chess Club, but his match against Frank Marshall in 1909 was expected to be something of a mismatch. And so it proved, but in the other direction, as the Cuban defeated one of the best players in the world by a score of 8 wins to 1, with 14 draws. In 1911, he entered his first international tournament in San Sebastian (to which he was admitted only at Marshall's insistence), and finished ahead of every top player except Lasker. (See Classic Game 39.)

Capablanca tried for years to get a match with Lasker, and in 1921 Lasker considered resigning the championship in Capablanca's favor, but Capablanca had raised such high stakes that Lasker couldn't turn him down. They played in Havana, and after Capablanca had won 4 games, lost none and drawn 10, Lasker resigned the match. In his notes, Lasker reported that he had been fatigued by the climate, but was gracious enough to admit that Capablanca probably could have beaten him no matter where they played.

Capablanca had long deserved the match; he had been unbeatable for years. When he lost a game to Richard Reti in the great New York 1924 tournament, it was the subject of a New York Times headline. An employee of the Cuban foreign ministry, Capablanca had the advantage of being assigned to any city in which he had to play a tournament. Like Morphy, he was a fast and intuitive player, fond of simple, direct lines of attack. (See Classic Games 44, 47, 48, 50, 61, 64, 65, 68, 71 and 73.)

Capablanca symbolized the post-Steinitz "technical" era; he did little that was new, but he did everything extremely well. Unlike his predecessor or his successor, he lacked the driving ambition to create something new, or to accomplish more than his natural gifts could achieve so effortlessly. At his best, though, his games are as close to perfection as any ever played. Capablanca's greatest triumph was perhaps New York 1927 (see Classic Game 64), where he finished 3 $^1/_2$ points ahead of a field including Alekhine, Nimzovich, Vidmar, Spielmann and Marshall. His greatest disaster came only a few months later.

Like many champions, Capablanca was accused of avoiding matches, and when he finally did defend his crown in Buenos Aires against Alexander Alekhine in 1927, the match took a surprising turn.

Alekhine (1892–1946) was born in Russia, but after the Revolution his Czarist sympathies eventually resulted in his settling in France. From 1914 until 1927, he was at the top of the "second tier" masters, behind Lasker and Capablanca, but few observers gave him a serious chance to defeat the great Cuban. Certainly Capablanca did not. But Alekhine was quite a different sort of player than his rival. It was said that "chess was the breath of life to him," a man of furious energy who constantly studied games, openings and his opponents. In 1926, already known as a brilliant combinative player and attacker, he resolved to equal Capablanca at his own game of positional play and maneuvering. He succeeded and won the protracted Buenos Aires match 6–3, with 25 draws. (For examples of Alekhine's play, see Classic Games 51, 52, 53, 55, 57, 60, 65, 67 and 69.)

For the next eight years, Alekhine dominated the tournament scene to a far greater extent than any of his predecessors, but he played only two matches, with Ewfim Bogolyubov, who had been first at Moscow 1925 ahead of Capablanca and Lasker. (See Classic Game 61.) His lesser rivals were unable to raise an

A game played with living chessmen is the finale to a chess tournament in Ebersburg, Germany.

adequate stake, and it proved impossible to negotiate a rematch with Capablanca. The question of who is to blame can still arouse fevered arguments; it is safe to say that neither was a man of small ego.

Alekhine made his first title defense in 1929 when he beat Bogolyubov handily. A rematch with Capablanca was announced, but the prospect of beating Bogolyubov again proved to be too alluring, and Alekhine trounced him in a rematch in 1934. In 1935, Alekhine lost the championship unexpectedly to Dr. Max Euwe of the Netherlands (see Classic Game 77) in a match for which he had not prepared, and during which he reportedly drank heavily.

1957 World Champion Vassily Smyslov.

Dr. Euwe, obviously unaware of how a chess champion behaves, offered Alekhine an immediate rematch. It took place in 1937, and Alekhine got the crown back. Equally unaware of how an ex-champion behaves, Dr. Euwe failed to blame his loss on poor health. (See Classic Game 76 for another Euwe game.) Discussion of a match with one of Alekhine's younger rivals—Fine, Keres or Botvinnik—was halted by the Second World War.

When Alekhine died in 1946, the World Championship was left vacant for the first time since 1886. The International Chess Federation (usually known by its French acronym FIDE) had been founded in 1924, but, ignored by successive world champions, had done little other than to organize the world team championships ("Olympiads"). Now, strengthened by a postwar influx of member nations, including the Soviet Union and its satellites, FIDE proposed a six-player match tournament to select a new champion.

The event was finally held in The Hague and Moscow in 1948 between Mikhail Botvinnik, Vassily Smyslov, Paul Keres, Samuel Reshevsky and Max Euwe. Reuben Fine had also been invited, but he gave up tournament play around this time to pursue a career in psychoanalysis. Botvinnik (b. 1911), who had been engaged in negotiations for a match with Alekhine at the time of the latter's death, scored an overwhelming victory, finishing three points ahead of his nearest rival.

Along with his tactical gifts and strategic depth, what Botvinnik brought to the game was the concept of scientific preparation. Alekhine indeed had studied constantly and prepared for each opponent, but few could match the inhuman self-discipline of Botvinnik. On one occasion he ordered his second to blow smoke in his face during a training game to prepare for a tournament. On another, he had Salo Flohr, one of his aides, collect every example of an endgame with a Rook plus pawns on the f and h files[5] versus Rook, a difficult ending that is sometimes drawn. "But Mischa," Flohr objected, "those positions occur once in fifty years!"

Boris Spassky, World Champion 1969-72, now representing his adopted country France on the international scene.

"No, no," replied Botvinnik, "there is no point in playing for the World Championship unless I understand that ending." (See Classic Games 78, 82, 85, 87 and 90 for examples of Botvinnik's play.)

Since Botvinnik's victory, save for one notable interruption, the Soviets have dominated international chess. Chess was officially encouraged and controlled by the government in the Soviet Union. At the Third All Union Congress in 1924, chess was declared a political instrument, and subsequent government programs sought to encourage chess play, and to discover and foster chess talent—programs which produced a great number of strong Soviet Grandmasters. Western players from Fine to Fischer have accused Soviet masters of colluding to insure the victory of one of their own in major tournaments.

At the time of the 1948 Hague-Moscow tournament, FIDE set up a program of qualifying tournaments to produce a challenger for the World Championship every three years. Botvinnik's first challenger was David Bronstein (b. 1924), who in 1951 drew a hard-fought match, permitting the champion to retain his title. (See Classic Games 89, 101, 107 and 108 for examples of Bronstein's play.)

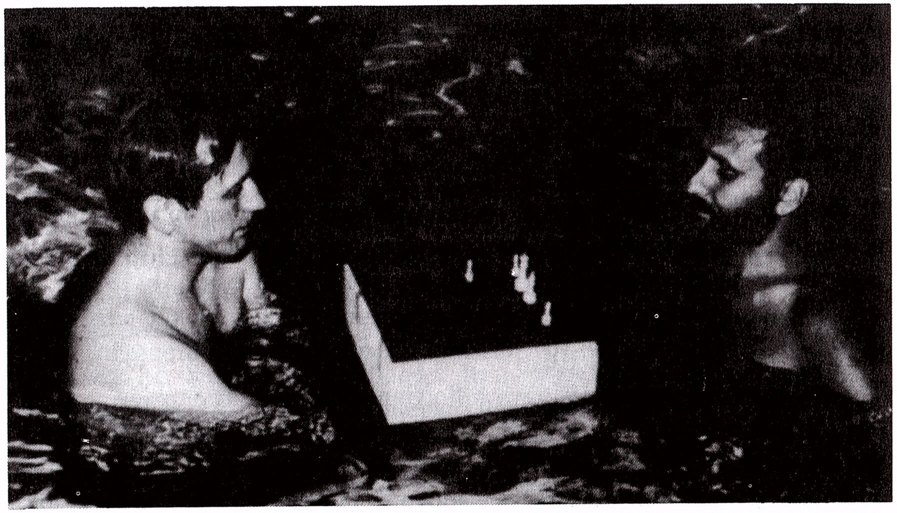
The result was the same in 1954 when Botvinnik faced Vassily Smyslov (b. 1921), but in 1957 Smyslov not only again topped the Candidates' cycle—a remarkable feat—but beat Botvinnik as well. At the time, FIDE rules permitted an ex-champion to demand a rematch after only one year, so Botvinnik was able to get his crown back in 1958.

Throughout this period, the World Champion was, in Botvinnik's phrase, "first among equals." There were perhaps half a dozen players—Botvinnik, Smyslov, Bronstein, Keres, Reshevsky—who could legitimately have held the title. Bronstein's strength was in originality and imagination, while Smyslov was an intuitive player somewhat similar to Capablanca; at his peak it seemed that his judgment was nearly infallible. (For examples of Smyslov's play, see Classic Games 92, 100 and 109.)

A certain professional courtesy now developed among the top players: win with White, draw with Black, draw with one another and beat the back-rankers. Then Tal arrived on the scene.

From 1958 to 1961, the Latvian Mikhail Tal (b. 1936) equaled and surpassed his Grandmaster colleagues. He brought to the game a furious energy, tremendous calculating ability and a willingness to take risks not seen since Alekhine's heyday. His piratical style and ebullient personality endeared him to the chess public far more than his reserved predecessors. Confounding the experts, who had predicted a prolonged duel between Botvinnik and Smyslov until the older man at last succumbed, Tal decisively won the Bled 1959 Candidates' Tournament (see Classic Game 100). In the process he administered a 4–0 drubbing to the 16-year-old Bobby Fischer, who already felt that he should be Champion. The "magician from Riga" went on to defeat Botvinnik in 1960, $12^{1}/_{2}$–$8^{1}/_{2}$. Soviet chess authorities were quite upset by this turn of events, because Tal plays a very unorthodox game by Soviet standards. (See Classic Games 102, 114 and 145 for other examples of Tal's play.)

The Soviets were able to relax the next year when Botvinnik, again taking advantage of his "divine right" to a rematch, prepared carefully and recaptured the title 12–8. Though a strong and dangerous Grandmaster even today, Tal was plagued in the next few years by health problems, and never again succeeded in reaching the summit.



Former World Champion Bobby Fischer (l.), in happier days, enjoys a floating chess game against three-time U.S. Champion Larry Evans.

Botvinnik's next challenger was another countryman, Tigran Petrosian, whose game consisted mostly of waiting for his opponent to do something. (See Classic Games 103, 111 and 117.) Botvinnik must have done something wrong, for Petrosian beat him in 1963, winning 5–2, with 15 draws. By this time, FIDE had abandoned its one year rematch rule, and rather than wait three years to get another shot at the championship, Botvinnik retired from world championship competition, though he continued to play with success in tournaments for another seven years.

In his first defense, Petrosian sat back and allowed Boris Spassky (b. 1937) to make the mistakes. The young and outgoing Spassky, an aggressive and well-rounded player, had scored a string of tournament victories far more impressive than Petrosian's. But he made just enough mistakes for Petrosian to win 4–3, with 17 draws, thus becoming the first incumbent World Champion to win a match in 32 years. Spassky apparently learned something from experience, because in 1969 he beat Petrosian 6–4, with 13 draws. (See Classic Games 101, 124 and 129 for examples of Spassky's play.)

This circulation of the title among strong and approximately equal Grandmasters might have continued indefinitely had it not been for Bobby Fischer (b. 1943).

Though he has not played since 1972, Fischer remains a controversial figure in the chess world. From the time of his brilliant victory over Donald Byrne at the age of 13 (Classic Game 95), Fischer was recognized as one of the strongest players in the world by many—and certainly by himself, as he developed a Messianic conviction that he would become World Champion. Though supremely objective in his approach to chess, his behavior otherwise did not endear him to his colleagues. It did, however, create extensive publicity for chess. (See Classic Games 99 and 106 for other examples of Fischer's style of play.)

At the Sousse Interzonal of 1967, he withdrew while leading, after a dispute with the organizers over the playing schedule. (Fischer had by that time joined a religious sect which forbade playing on its Sabbath.) He refused to compete in the U.S. Championship in 1969, apparently excluding himself yet again from the championship cycle. But negotiations by the U.S. Chess Federation (USCF) enabled him to play in the 1969 Interzonal in Palma de Majorca. His time had come.

After winning the Interzonal by $3^{1}/_{2}$ points, he proceeded to sweep his Candidates' Matches against Mark Taimanov and Bent Larsen with unprecedented 6–0 scores. Fischer then beat Tigran Petrosian $6^{1}/_{2}$–$2^{1}/_{2}$. There remained only Boris Spassky.

World Champion Gary Kasparov (l.) and former Champion Anatoly Karpov—friendly enemies.

The off-the-board maneuvering surrounding the 1972 Spassky–Fischer match in Reykjavik filled the news media. For a long time it seemed that Fischer would not play for reasons which he considered matters of principle, though few objective observers agreed. But a last-minute offer by British industrialist James Slater raised the prize fund to an unprecedented (this word occurs often when discussing Fischer) $250,000, and Fischer at last arrived.

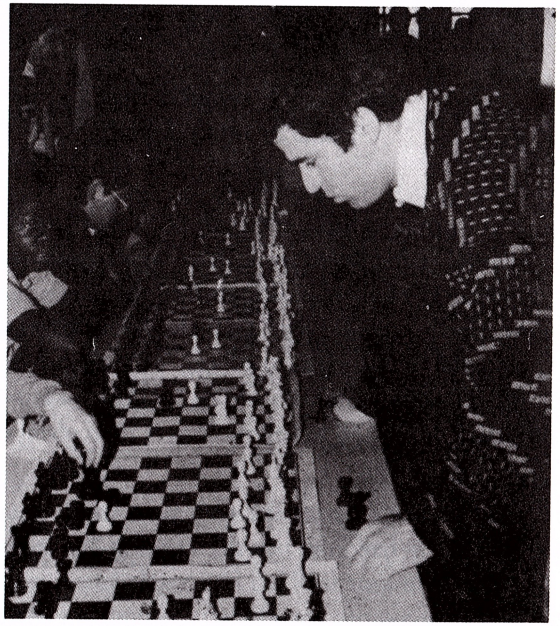
When he finally sat down at the chessboard, the result was seldom in doubt. Despite a loss in the first game and a forfeit loss in the second, he won by a score of 12$^1/_2$–8$^1/_2$. (See Classic Games 119 and 120.) For the first and last time since the death of Alekhine, someone outside the Soviet bloc was World Champion.

In 1975, Anatoly Karpov (b. 1951) unexpectedly rose to the top of the Candidates' cycle, defeating Lev Polugaevsky, Boris Spassky and Viktor Korchnoi. (See Classic Game 124.) Karpov thus won the right to challenge Fischer for the title.

But Fischer proposed a new set of match rules, which he steadfastly claimed were historically justified. When FIDE declined to accept one of them, he resigned his title and withdrew from the chess world. Karpov became champion.

Fischer never played again.Throughout the 1970s, Karpov played frequently. Apparently he felt the sting of being an "accidental" champion and sought to prove that he deserved the title. His play, while not overpowering, was just that much better than anyone else's. (For other examples of Karpov's play, see Classic Games 126, 131, 137 and 142.)

His first title defense came in 1978 against Viktor Korchnoi (see Classic Game 128), who had by now defected to the West. This naturally did not endear Korchnoi to the Soviet chess establishment. Soviet players boycotted tournaments in which he played, his family was not permitted to emigrate, and the match with Karpov saw a degree of personal animosity unknown since Alekhine and Capablanca. Despite these handicaps, Korchnoi was only narrowly defeated. Korchnoi was again the challenger in 1981 but this time Karpov won easily with six wins, two losses and ten draws. It was time for a new challenger. (For another Korchnoi game, see Classic Game 138.)



World Champion Gary Kasparov plays a simultaneous exhibition with New York schoolchildren.

The rising star now was Gary Kasparov (b. 1963), something of an outsider in Soviet chess circles. After some early erratic results, Kasparov in the early 80s began to win consistently, in a style reminiscent of Tal and Alekhine. Kasparov took the world title in 1985, defeating Karpov by a score of 13–11. (See Classic Game 140 for Kasparov vs. Karpov and Classic Games 133, 137 and 146 for Kasparov against other opponents.)

Counting an aborted first match in 1984, when Karpov's health was given for the cancellation, the former and present World Champions have played five matches up to 1991. Out of 144 games they are within two points of each other. The slight edge Kasparov holds is not indicative of his tournament superiority, where he has not only competed vigorously—worthy of a champion—but has consistently come ahead of Karpov.

The decade of the 90s has already seen a weakening of the dominance of the "two K's." In two major tournaments of 1991, Linares and Amsterdam, Ivanchuk and Short came first, respectively, ahead of Kasparov and Karpov. In the hectic pace of modern Grandmaster tournaments, the crown of chess champion is worn lightly.

CHESS AND MACHINES

> *Even if we could teach a computer to play chess merely as well as a—to use Norbert Wiener's simile—majority of the human race (no offense meant), we would be furnishing definite proof that a machine can solve problems of sufficient complexity to defy the reasoning ability of millions of people throughout their lives.*
>
> —*Edward Lasker,*
> The Adventure of Chess

In 1769, a Viennese expert in hydraulics and acoustics, Wolfgang von Kempelen, exhibited an interesting conjurer's trick to the Imperial Court of Maria Theresa. It was a life-sized figure of a Turk seated behind a chessboard on top of a chest. The chest appeared to be filled with cogs and gears, which von Kempelen would demonstrate in the course of a game of chess against a human challenger. The Turk would invariably win, and its entertainment value was the same as any magic act: how did he do that? It was obvious to all that no machine could possibly play chess.

After von Kempelen's death, the Turk was bought by a Bavarian musician and showman, Johann Maelzel. Maelzel had already built and exhibited mechanical devices of his own: a mechanical trumpet player, and the Panharmonicum, which played a variety of orchestral instruments. (Beethoven composed pieces specifically for both devices.) Maelzel took over the Turk and was successful far beyond anything he could have imagined, making huge amounts of money. Never claiming that the device itself actually played chess, he made it part of the show to demonstrate the impossibility of hiding a human inside the Turk.

Even today we are not sure how the Turk actually operated. We know there was a man hidden inside the device, and that he used an arrangement of levers called a pantograph to make the Turk's arm move his pieces, but beyond that, we have only guesses. We will never know for certain because the Turk was destroyed by a fire in 1854—in Philadelphia.

Another device, called Ajeeb and dressed as an Egyptian, was built in 1868 and had a similar career. Ajeeb also beat all comers, and at one time the "inside man" was the American master Harry Pillsbury. Ajeeb, too, was destroyed in a fire, this one at Coney Island in 1929.

However, in the late 19th century, something much more interesting and more directly related to computer chess was happening at the *Escuela Technica Superior de Ingenieros de Caminos* (The School of Road Works) at Spain's Polytechnic

University. Leonardo Torres y Quevedo had devised a pressure sensor connected to a rudder which would keep torpedoes at a constant depth. Torres y Quevedo was impressed by the "intelligence" of the sensor in performing its limited task. It functioned much more efficiently than any human could, and Torres y Quevedo wondered if there might be more things a device might be "taught" to do. So, in 1890 he built a prototype device which would play the chess ending of White King and Rook against a human with the Black King. Not only did the device win, it also said "check" and "mate." A final version was exhibited at the Paris World Fair in 1914, but the World War prevented any further work.

In 1939, the British Foreign Office established the Department of Communications at Bletchley, 50 miles north of London. Their purpose was to build a device which would crack German coded messages no matter how the ingenious German encoding device known as "Enigma" was set. In order to accomplish this task, the Foreign office had to go beyond cryptanalysis experts, so they also employed mathematicians, electronic engineers, linguists, crossword puzzle buffs and chess players.

The man most responsible for the success of the project was Alan Turing, a prominent and eccentric mathematician and a chess buff. Earlier, Turing had proposed a theoretical computing machine which would simulate the operation of any other machine. This "Turing machine" became part of the foundation of modern computer theory.

At Bletchley, Turing built a device to decode Enigma messages. Known as "the bomb" or "Ultra," Turing's machine worked so well that Allied leaders frequently had German messages decrypted and translated before their intended recipients got them.

Turing's device was not a computer, however. After the war, Turing got a large grant from the British government to build a general purpose electronic computer. Although he had established the mathematical concept for such a machine in 1936, building a working model was not easy. Turing talked to reporters about it in 1946, calling it an "automatic computing engine," and in the same interview discussed the possibilities of computer chess. He was quoted as saying "That is a question we may be able to settle experimentally in about 100 years time."

But Turing had worked out the formulas necessary for a chess program, and in 1951 or 1952 he used it in an actual game. Working his program from notes on paper, Turing played Alick Glennie, who was an admittedly weak player. Glennie reported that Turing had trouble operating his own program because it often chose moves that Turing knew were wrong. The game took about two or three hours, and ended when Turing's program lost its Queen. Turing was quoted as saying the program has resigned "on the advice of his trainer." In his spare time,

Turing began programming the Manchester University computer to play chess, but died before he could complete his work.

In the United States, Dr. Claude E. Shannon of Bell Labs described in March of 1949 how an electronic computer could be programmed to play chess. Shannon was interested in computer chess only because most people felt that chess required "thought." If a computer could be programmed to play chess, Shannon felt, that would hold great theoretical implications for the future of computers. Two of Shannon's proposals are still of interest. He defined the two schools of chess programs, brute force (rapidly looking at all possible moves) vs. heuristic programming (choosing moves based on some set of rules). Shannon favored brute force because that approach takes advantage of the computer's obvious strengths. He also suggested that machines be programmed to learn directly from their mistakes, a refinement that in the main has thus far eluded programmers.

In Los Alamos, New Mexico in 1956, Ulam and Stein actually programmed a computer to play a simplified version of chess (a six by six square board, leaving out the Bishops, limiting pawns to a one square advance on opening and omitting castling). They wanted to know whether a computer could make reasonable moves solely on the basis of material gain and increased mobility. The computer played itself first, revealing an inordinate fear of being in check. After a few improvements, the program, MANIAC I, became the first computer program to win a game against a human—an unnamed volunteer who had learned the game only a week before. Capable of 11,000 operations per second, MANIAC I used exhaustive search to look ahead four plies[6] in 12 minutes per move.

In an article in the June 1958 *Scientific American,* Alex Bernstein, a mathematician and a very strong chess player, and Michael Roberts described how they, Timothy Arbuckle and M.A. Belsky had programmed an IBM 704 to play chess. Their program ran on 8,000 punch cards, and required that its opponent punch his moves into a card and then feed it into a reader. The machine conducted a 4-ply search like the Alamos program, but also added two new considerations, King defense and area control. Bernstein's program also used a ratio to consider material evaluation, which was an advance over the simple point system used previously. Running at about 42,000 operations per second, this program was able to play a fair amateur game at the rate of a move every eight minutes.

The next year, Herbert Simon, Allen Newell and Clifford Shaw of the Rand Corporation and the Carnegie Institute of Technology came up with a very complex program that could play at the medium amateur level. It took about an hour per move, but because it represented such a huge leap in computer chess technology, it led Herbert Simon to predict that within 10 years a computer would be the world chess champion.

In 1965, Professor Hubert L. Dreyfus evaluated the play of MANIAC II (an improved MANIAC which played on a full eight by eight board), Bernstein's program for the IBM 704, and a program of his own, and announced, "Still no chess program can play even amateur chess." By December of that year, Dr. Dreyfus had lost a game to MAC HACK, developed by Richard Greenblatt and Donald Eastlake of M.I.T. MAC HACK was another breakthrough, able to defeat about 80 percent of non-tournament level players. Greenblatt and Eastlake were good programmers with a very fast computer for the time, the PDP-6. Their "plausible move generator," with 50 criteria for a move, cut down on the number of moves the machine had to consider. And there was one other important factor: most opponents resigned too soon. Believing that MAC HACK's strong opening and middle game represented its ability, few humans got as far as MAC HACK's dreadful endgame. By 1968, when MAC HACK VI was demonstrated at the International Federation of Information Processing (IFIPS) meeting in Edinburgh, its rating was 1500 Elo7.

After this, things began happening very quickly. Between 1967 and 1970, eight new programs appeared in the United States alone, and in 1970, the first U.S. Computer Chess Championship took place. CHESS 3.0, created by David Slate, Larry Atkin and Keith Gorlen of Northwestern University, swept the tournament, winning all three of its games. The CHESS program as version 3.5 in 1971 and 3.6 in 1972 also won all of its games in the next two U.S. championships. The 1972 contest featured notes on the games by Samuel Reshevsky, a grandmaster and ex-U.S. champion.

In 1974, CHESS 4.0 appeared, a completely new version which marked a switch from selective search to full-width search, in keeping with Dr. Shannon's predictions of the greater suitability of the brute-force approach. Unfortunately, this was the version that lost the first World Computer Chess Championship in Stockholm. It placed second to KAISSA from the Soviet Union, a program on which Mikhail Botvinnik, the ex-World Champion, had worked. In all fairness, it should be pointed out that CHESS did not play KAISSA in the tournament, and in an unofficial game played after the event the outcome was adjudicated a draw after the 65th move. In the second World Computer Championship held in Toronto in 1977, CHESS 4.6 won in a clean sweep, although again, it did not meet KAISSA during the match. This time, however, when they played afterwards, CHESS beat KAISSA in 44 moves.

In 1978, it was time to play the "Levy challenge." Ten years earlier, the International Master David Levy had bet two computer scientists £500 that no computer chess program would be able to beat him in ten years' time. When the match came around, the bets had increased to £1,250, and Levy played a series of matches against CHESS 4.5, KAISSA, MAC HACK VI and CHESS 4.7. Levy won every match, and only CHESS 4.7 was able to score a point against him. While disappointing to its programmers, its one win against Levy represented the first time a computer had won a game against an International Master.

Omni Magazine then offered $4,000 to the first program to beat Levy. Levy increased the stake to $5,000, and in 1983, he was challenged by the creators of CRAY BLITZ, the winner of the 1983 World Computer Chess Championship. Levy played CRAY BLITZ in April of 1984, and although he did not lose a game, Levy did compliment the programmers by studying CRAY BLITZ's games in detail.

CRAY BLITZ was also beaten as North American Computer Champion in October of 1985 by HITECH, designed by Hans Berliner, Carl Ebeling and Murray Campbell of Carnegie-Mellon University. Berliner designed a unique processor he called the searcher, which employs 64 chips, one for each square on the board. Each chip examines the entire board for moves and determines the best one. The searcher then ranks the 64 choices, and the game tree is searched as deep as 14 plies based on the searcher's ranking. So far, HITECH has had an easy time playing computer opponents.

The current standard bearer of intelligent machines and software is DEEP THOUGHT, the brainchild of another group at Carnegie-Mellon, three of whom are now carrying on their work at IBM: Campbell, joined by Feng-hsiung Hsu, Thomas Anantharaman, and Andreas Nowatzyk. In an article in 1990 in *Scientific American* commemorating that magazine's original prospectus for a chess computer 40 years ago, this group predicted that in the early 1990s they would be able to run DEEP THOUGHT on much more powerful hardware, going from the current 750,000 position-per-second analysis to one *billion.* This thousand-fold plus increase, they claim, will enable this next generation machine to play at a 3400 rating, more than 500 points ahead of Kasparov!

Kasparov still feels that a human champion will be able to find ways around the most powerful of computers. In late 1989 he proved his point against DEEP THOUGHT by subduing it convincingly in a two-game, $10,000 match in New York (see Classic Game 146). Yet DEEP THOUGHT's record grows more convincing each month: by 1990 it had a score of 50 percent against ten Grandmasters and 86 percent against 14 International Masters. And this under tournament conditions.

Earlier, we quoted from Edward Lasker's *The Adventure of Chess.* Lasker stated that if a computer could play chess *merely as well* as the vast majority of the human race, "we would be furnishing definite proof that a machine can solve problems of sufficient complexity to defy the reasoning ability of millions of people throughout their lives." Your *Chessmaster 3000* far exceeds Lasker's requirement. The creators of *The Chessmaster 3000* gratefully acknowledge the pioneering efforts of those programmers whose earlier chess programs paved the way for the state of the art program you now own.

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1 The *opening* is the first few moves of the game. The term also refers to a specific sequence of initial moves whose consequences have been studied.

2 A *gambit* is an opening in which a pawn or piece is sacrificed in an attempt to gain an advantage.

3 Strong players can handicap themselves when playing weaker ones, either by removing one or more of their pieces at the outset, or by giving the opponent one or more free moves, or both.

4 A *combination* is a series of interrelated moves aimed at producing an advantage.

5 See the explanation of algebraic notation on page 65.

6 A *ply* is a half move. Thus, a four ply search would examine all the computer's possible moves, all possible replies by the opponent, all the computer's responses to those, and all the opponent's responses.

7 The system developed by Arpad Elo assigns a player a numerical rating based on his (or its) record against other rated players.

THE HISTORY OF *THE CHESSMASTER 3000*

In 1986 The Software Toolworks developed the first of a new generation of chess software for personal computers, *The Chessmaster 2000.* An instant classic, *The Chessmaster 2000* broke new ground by combining advanced artificial intelligence with striking new human interface concepts. Leapfrogging past traditional flat chessboard representations, *The Chessmaster 2000* presented the user with a three dimensional playing surface. In addition, numerous new features allowed manipulation of the chess playing environment. *The Chessmaster 2000* thus became the standard by which future chess products would be judged.

Two years later, in 1988, *The Chessmaster 2000* remained at the top of its field. Not content to sit on their laurels, The Software Toolworks stretched the boundary of chess programming even further with the release of *The Chessmaster 2100,* which was smarter, stronger, and had a new versatile mouse interface. *The Chessmaster 2100* created an entirely new play environment with the addition of the War Room. Here the advanced player could command armies while directly viewing the thought processes of the opponent. All the information about the game, from captured pieces to move lists to computer analysis were laid out to devise a battle plan. *The Chessmaster 2100* gave the player an astounding new ability to control destiny.

Now, in 1991, The Software Toolworks takes another giant stride forward with the release of *The Chessmaster 3000.* The watchword in the evolution of Chessmaster has always been control. With *The Chessmaster 3000,* the user can now take the reins of the computer itself, and mold it as desired. In addition to several new pre-set "personalities," the player can now modify how *The Chessmaster 3000* thinks, how it values individual pieces, how it evaluates positional strength, in short, how it tries to crush its opponents. Never has any chess program given the user this much power.

The Chessmaster 3000— the next stage in computer evolution.

THE CHESSMASTER'S LIBRARY OF CLASSIC GAMES

1. ***Captain Smith–Philidor, London, 1790***
   The modern era of chess begins with Philidor's positional analysis of the openings. Though he died in the 19th century, his was the most widely printed book in chess history. In this historically interesting game Philidor actually demonstrates the power of a superior pawn formation, confirming his famous maxim: "Pawns are the soul of chess."

2. ***La Bourdonnais–McDonnell, 21st Match Game, 1834***
   A wild attacking game where both sides play for mate. This game has an incredible and amusing finish.

3. ***McDonnell–La Bourdonnais, 62nd Match Game, 1834***
   In a sense, the McDonnell–La Bourdonnais encounters marked the beginning of modern chess—a set match of serious games between recognized champions, in which all the games were recorded and published. This was the Frenchman's most famous win of the match (really a series of six matches, won by La Bourdonnais +45=13–27[1]), in which we have the unusual spectacle of a mass of pawns overcoming a Queen.

4. ***St. Amant–Staunton, 9th Match Game, Paris, 1843***
   Replaying this game requires a mental adjustment: St. Amant, following the custom of the era, had his choice of color as the first mover and chose…Black. (This custom persisted in parts of Europe into the 20th century.) This has only psychological value, but makes it difficult to follow old books. The player to win 11 games would gain the 100 pounds sterling stakes, and this Staunton did with the 21st game. In this, the eleventh, he appears to be on his way to another positional victory. Then St. Amant, with 32. b4 hoodwinks the Englishman with one of history's finest "swindles."

5. ***Anderssen–Kieseritsky, London, 1851***
   Anderssen sacrifices a Bishop for a handful of tempos[2] and an attack on Black's Queen. Later he sacrifices both Rooks to continue his assault on the Black King. Finally, Anderssen parts with his Queen for a pretty mate with his two Knights and Bishop. Hence, the "Immortal Game."

6. ***Anderssen–Dufresne, Berlin, 1853***
   White sacrifices a piece to open the central files against the uncastled Black King, and despite his seemingly adequate development and counter-attacking chances, Black comes out a tempo short in one of the finest combinations on record, justly known as the "Evergreen Game."

7. ***Paulsen–Morphy, New York, 1857***
   Paul Morphy competed in only one tournament in his short career, the First American Chess Congress in 1857. In the final round of the knock-out event, he defeated German master Louis Paulsen by a score of +5=2–1. In this game he demonstrates both his better grasp of positional play—Black's control of the center files makes a marked contrast to White's flailing on the flanks—and his combinative ability, as he finishes the game with a startling and brilliant Queen sacrifice.

8. ***Morphy–Duke of Brunswick and Count Isouard, Paris, 1858***
   Waiting for Anderssen to arrive from Breslau, Paul Morphy enjoyed the delights of Paris—including the Opera House. During *The Marriage of Figaro* he entertains his hosts with this elegant brilliancy, mating on the 17th move with his last two pieces!

9. ***Morphy–Anderssen, 9th Match Game, Paris, 1858***
   A school teacher, later professor of mathematics, Adolph Anderssen had to fit this now-historic match into the Christmas holidays. In some cases, two games were played in one day. This game and many others in the series give lie to the myth that Anderssen was interested only in attacks on the King. Here he answers a sharp assault on the Sicilian—repeated by Fischer more than a century later—with equal energy. The result is a violent miniature.

10. ***G.A. MacDonnell–Boden, London, 1861***
    Once dubbed the "Koh-i-Noor" of chess, this game is quite typical of the period—a slashing attack appears out of nowhere, for defensive technique was little practiced even by the best players. The winner should not be confused with La Bourdonnais's opponent, Alexander McDonnell.

11. ***Matchego–Falkbeer, London, 1869***
    In playing over these old games, it is best not to ask too many questions about the defender's play—the gap in strength between master and amataur was often enormous. Instead, relax and enjoy the tragicomic plight of the White King, as he is driven across the board and mated with his pieces still at home.

12. ***Anderssen–Steinitz, 13th Match Game, London, 1866***
    In a see-saw match a new force emerges in the person of Wilhelm Steinitz. In this decisive game, the younger man launches a "pawn roller" against White's King, while the man famous for the "Immortal" and "Evergreen" games pursues a positional attack on the Queenside. The White King runs, but can't hide.

13. ***Bird–Mason, New York, 1876***
    This brilliancy-prize game by Henry Edward Bird, one of England's premier players for half a century, features a speculative Queen sacrifice with the unusual combination of two Rooks and Knights against Queen, Rook and Knight. A delight!

14. ***Zukertort–Blackburne, London, 1883***
    A striking combination by Zukertort, perhaps the last of the "old school" masters. After his defeat by Steinitz in 1886, it became clear that Steinitz's positional theories had brought a new aspect to the game.

15. ***Zukertort–Steinitz, 7th Match Game, New Orleans, 1886***
    The first match recognized as a World Championship contest began badly for Steinitz. Then he settled down into a positional game that has ever since been his hallmark. The battle here, and in innumerable Queen's Gambits since, has been over the strength or weakness of the isolated Queen pawn, and, later, the "hanging pawns" in the center.

16. ***Blackburne–Lipschütz, New York, 1889***
    White allows his opponent to obtain two passed pawns on the Queenside in exchange for posting a Rook on the seventh rank. The game was adjourned at move 31, and not only Lipschütz, but the spectators—including Steinitz—were certain that Black must win. The combination initiated by White's 32nd move brought a rude awakening.

17. ***Lasker–Bauer, Amsterdam, 1889***
    An early example of the double Bishop sacrifice, the "chess mill" theme, and the skill of the then-young Emanuel Lasker, who only five years later would challenge Steinitz for the world championship.

18. ***Chigorin–Pollock, New York, 1889***
    Though he demonstrated many ideas well ahead of his time, Chigorin was best known in his own era as a fierce attacker. Here he makes good use of one of his favorite weapons, the Evans Gambit.

19. ***Steinitz–Chigorin, 4th Match Game, Havana, 1892***
    Their first match here in 1889 was the bloodiest in world championship history: a single draw out of 17 games! The second time around, there were

still only five draws in 23 games, but the champion retained his title only by slugging it out with the ferocious Russian.

20. ***Lasker–Steinitz, 7th Match Game, New York, 1894***
Lasker comes to the New World and seizes the championship. This game, famous for the deadly error on move 34 by Black, began a run of five straight wins by Lasker in his inimitable style of smoke and mirrors.

21. ***Steinitz–von Bardeleben, Hastings, 1895***
Steinitz takes advantage of his lead in development and his opponent's King being stuck in the center by playing one of the most remarkable Rook sacrifices ever.

22. ***Pillsbury–Tarrasch, Hastings, 1895***
Pillsbury, a virtual unknown, comes to Hastings, England in 1895 and wins one of the strongest tournaments of all time. Here, he shows that the Queen's Gambit Declined opening can lead to a strong attacking position. Note Pillsbury's beautiful 44th and 45th moves.

23. ***Pillsbury–Lasker, St. Petersburg, 1896***
Lasker scores a brilliant combinative victory over arch-rival Pillsbury. The players castle on opposite wings, but White loses time with a premature attack—time which Black uses to make a profound Rook sacrifice. See also Classic Game number 30.

24. ***Lasker–Steinitz, 2nd Match Game, Moscow, 1896***
A preview of Russian hegemony in chess a half-century later: Moscow is the venue for Lasker's easy "return match" victory. The mating combination in this game is spectacular, as if Lasker felt that winning was not enough.

25. ***Tarrasch–Marco, Vienna, 1898***
Siegbert Tarrasch was the great explicator of Steinitz's theories, but the dogmatic certainty with which he and others expounded them provoked the Hypermodern reaction[3] of the 1920s. Tarrasch ignored those aspects of Steinitz uncongenial to his style (such as defense of cramped positions), but in the exploitation of a space advantage and the use of active pieces he had few peers.

26. ***Janowski–Pillsbury, London, 1899***
The flambuoyant David Janowski had two disastrous runs at the world championship—scoring a single victory in the matches with Lasker. Yet he left his mark on the game in his insistence on the power of the two bishops. Here he deftly dispatches the American, Harry Nelson Pillsbury, with a characteristic Bishop move.

27. ***Pillsbury–Marco, Paris, 1900***
Harry Nelson Pillsbury's record is perhaps less well known than it should be; his illness and premature death in 1906 deprived the world of the match against Lasker he had long sought. Here he scores another fine victory with the Queen's Gambit, as Marco thinks to improve on the Pillsbury–Tarrasch game (Classic Game number 22).

28. ***Marshall–Burn, Paris, 1900***
In his autobiography, Marshall, perhaps tongue in cheek, attributes his victory in this game to the fact that it didn't last long enough for Burn to light his pipe.

29. ***Lasker–Napier, Cambridge Springs, 1904***
Napier plays his best game of chess against Lasker, but loses in a free-for-all of combinations typical of Lasker's style.

30. ***Pillsbury–Lasker, Cambridge Springs, 1904***
Pillsbury was already suffering from the illness that would snatch him away in another two years. Yet he drives to victory in this landmark tournament by beating the world champion in a variation he lost with eight years earlier (see Classic Game 23). The attack on the Black King caught in the center is the finest in the literature of the game.

31. ***Schlechter–Marco, Monte Carlo, 1904***
The post-Steinitz era was thought by many to be a time of dull play in comparison to the previous century, culminating in Capablanca's prediction of a "draw death." But the greatest masters of the period were still able to rise above the uniformity of style and produce such sprightly games as this.

32. ***Rotlewi–Rubinstein, Lodz, 1907***
In contrast to his great rival, Lasker, Akiba Rubinstein was a player of calmness and simplicity; at his best, his victories seem as inevitable as the tide. Here he demonstrates the value of time, in a symmetrical position. White's first loss of tempo permits Black equality; the second invites a brilliant, devastating and logical attack.

33. ***Tarrasch–Lasker, 2nd Match Game, Düesseldorf, 1908***
On his 40th move the world champion finishes elegantly on the chessboard what had been an ugly duel of words away from the table. Thus began the tradition of public controversy that Fischer brought to new heights!

34. ***Janowski–Lasker, 2nd Match Game, Paris, 1909***
With seven wins against one loss in this ten-game match Lasker solidified his throne. In hindsight, these one-sided matches look like sandbagging by Lasker. But Janowski was always a dangerous opponent, and in this game

seemed to be crowding his adversary out—until Lasker's Knight on move 24 takes off on a decisive journey.

35. *Marshall–Capablanca, New York, 1909*

Frank Marshall, victor at Cambridge Springs, 1904, wrote that he thought this Cuban student would be a pushover. But the U.S. Championship was on the line, and the match was contested in several cities around New York. Frank's lone victory came at Scranton, Pennsylvania, game seven. He took only 45 minutes to contrive an elegant finish.

36. *Rubinstein–Lasker, St. Petersburg, 1909*

In this and a famous win over Capablanca, the enigmatic Polish emigre uses the same maneuver, Qc1, at a crucial point. Rubinstein parries the World Champion's tactical diversions and wins a fine endgame.

37. *Lasker–Schlechter, 10th Match Game, Berlin, 1910*

This game has ignited intense controversies, both from its shrouded history and its play. For many years it was believed that Schlechter, ahead by a point in the final game, had only to draw to win the world championship. Why did he, the "drawing master", suddenly decide to play for a win? Later research has shown that the match terms forced the challenger to win by two points, and this fact entered into Fischer's controversy with FIDE over the defense of his title in 1973. At a critical stage, Schlechter misses the winning maneuver and becomes only a footnote in chess championship history.

38. *Lasker–Janowski, 5th Match Game, Paris, 1910*

Janowski obtains his famous Bishop pair and has Lasker struggling to survive the opening. At a crucial moment, however, he backs away from a promising Queen sacrifice, and Lasker swiftly turns the tables.

39. *Capablanca–Bernstein, San Sebastian, 1911*

The young Capablanca was admitted to this event, intended to be limited to those who had taken at least two third prizes in international tournaments, only at the insistence of Frank Marshall, whom Capablanca had beaten in a match two years before. The Cuban won the event convincingly, losing only one game, to Rubinstein. Ossip Bernstein had been one of the most vocal opponents of Capablanca's admission to the tournament, and by chance they met in the first round.

40. *Rubinstein–Capablanca, San Sebastian, 1911*

Rubinstein earned his reputation as an endgame specialist with games like this. (See also Classic Game 36.) To outplay Capablanca, even a pawn up, required the highest artistry.

41. *Capablanca–Molina, Buenos Aires, 1911*

A famous example of the Bishop sacrifice at h7. The unusual feature of this game is that the sacrifice does not lead directly to mate, but rather to a sustained initiative from which Black is unable to escape.

42. *Ed. Lasker–Thomas, London, 1912*

The noted chess author Edward Lasker was a distant cousin of Emanuel. The young German player visited a London chess club in 1912 and was invited to play a game with the club champion Sir George Thomas. The result was a brilliancy which has graced the anthologies ever since.

43. *Lewitzky–Marshall, Breslau, 1912*

Though he was not the equal of Lasker or Capablanca, Frank Marshall was for many years one of the top half-dozen players in the world, and a formidable tournament competitor. His aggressive attitude, combinational flair and imagination produced numerous brilliant games like this one. Marshall reported in his autobiography that after the startling conclusion the spectators showered the board with gold coins.

44. *Lasker–Capablanca, St. Petersburg, 1914*

At the end of the first half of this double-round tournament, Capablanca stood a point and a half ahead of his nearest rivals, Lasker and Tarrasch. When he met Lasker again in the seventh of the ten final rounds, even a draw would have virtually assured the Cuban of first place. But Lasker, ever the chess psychologist, adopted an opening in which Black may try for the advantage but cannot easily draw. The result was a pivotal victory over the future champion.

45. *Nimzovich–Tarrasch, St. Petersburg, 1914*

Tarrasch, a master of the use of active pieces (see the description of Classic Game 25), here gives us another example of the double-Bishop sacrifice, as in Lasker–Bauer (Classic Game 17).

46. *Spielmann–Flamberg, Mannheim, 1914*

Rudolph Spielmann was in many ways a man out of his proper time. Dubbed "the last Knight of the King's Gambit," he sought a return to the swashbuckling style of Morphy and Anderssen.

47. *Capablanca–Janowski, New York, 1918*

During the First World War, only a handful of tournaments were held, and those in the United States without most of Europe's great players. Capablanca performed almost flawlessly during this period, earning the nickname "The Chess Machine." Here is a splendid example of a brilliancy prize game that is largely positional.

48. ***Capablanca–Marshall, New York, 1918***

Marshall launches a fierce counterattack with an opening novelty introduced in this game (now known as the Marshall Gambit), but Capablanca's chess instinct enables him to thread his way through the pitfalls.

49. ***Rubinstein–Vidmar, Berlin, 1918***

During the second and third decades of the century, dissatisfaction grew with the correct but colorless play of the post-Steinitz era, in which masters scored against opponents who had not assimilated the "new" principles of positional play, but generally drew with one another. One of the attempts to enliven Black's play was the Budapest Gambit, a sharp pawn sacrifice which Vidmar here uses to score an upset of the mighty Rubinstein.

50. ***Lasker–Capablanca, 10th Match Game, Havana, 1921***

The long-awaited title match between these two titans proved to be a disappointment, with Lasker obviously tired by the war years and not in his usual fighting spirit. Nevertheless, several great games resulted. Capablanca considered this positional triumph among his best efforts. The endgame is played with simplicity and precision.

51. ***Alekhine–Sterk, Budapest, 1921***

Alekhine considered this game very characteristic of his style. Maneuvers on the Queenside divert the Black pieces, setting the stage for a surprising mating attack with threats on both sides of the board.

52. ***Alekhine–Yates, London, 1921***

An extreme example of the "weak square complex." Alekhine so thoroughly dominates the dark squares that in the end even his King can march across the board to complete the mating net.

53. ***Bogolyubov–Alekhine, Hastings, 1922***

A remarkable game, in which Black gradually takes control of the whole board. A recurring combinative theme is the strength of an advanced passed pawn, which may create mating threats or break through to its Queening square.

54. ***Maroczy–Tartakower, Teplitz-Schonau, 1922***

A marvelous intuitive sacrifice. When offering the Rook at move 17, Tartakower's judgment told him that White would have no way to secure his King or obtain a counterattack, so that Black would be able to bring up the reserves at leisure.

55. ***Tarrasch–Alekhine, Pistyan, 1922***

A brilliancy prize game from the opening pawn sacrifice to the devastating Kingside attack. About this time, Alekhine was also astonishing the chess world with his simultaneous blindfold performances, increasing the record to 28 in Paris against first-rate opposition.

56. ***Rubinstein–Hromadka, Mahrisch-Ostrau, 1923***

Rubinstein's lucid play demonstrates the positional basis of the King's Gambit, as his diversionary threats on the open f-file prove a prelude to the decisive combinative blow against the Black King on the other flank.

57. ***Grünfeld–Alekhine, Carlsbad, 1923***

Another superb Alekhine combination, as he outplays opening expert Grünfeld in the middlegame.

58. ***Saemisch–Nimzovich, Copenhagen, 1923***

This game is known as the "Immortal Zugzwang[4] Game"—as soon as his pawn moves run out in the final position, White will have to fall on his sword.

59. ***Reti–Bogolyubov, New York, 1924***

Emanuel Lasker won this great tournament, a point and a half ahead of Capablanca, who in turn finished two and a half points ahead of Alekhine. But Richard Reti had the distinction of defeating Capablanca—his first loss in nine years—and he won the first brilliancy prize[5] for this game against Ewfim Bogolyubov.

60. ***Reti–Alekhine, Baden-Baden, 1925***

Reti was one of the leaders of the "Hypermodern" movement. Here Reti obtains a fine strategic position from his opening experiment, but is ensnared by Alekhine in a whirlwind of combinations after the rare kingside attack beginning with...R3.

61. ***Capablanca–Bogolyubov, Moscow, 1925***

The jolly, beer-drinking Russian, Bogolyubov, achieved his greatest triumph on his home ground, coming first ahead of the World Champion and Lasker. But Capablanca had the pleasure of beating the tournament winner in this fascinating King hunt.

62. ***Torre–Lasker, Moscow, 1925***

Carlos Torre burst on the chess scene when he moved from his native Mexico to New Orleans and then New York in the 1920s. In this game, played on his 21st birthday, he sweeps the seventh rank with an unusual discovered-check combination. Tragically, his career was cut short in a few years due to illness. This celebrated game is his birthday gift to posterity.

63. P. Johner–Nimzovich, Dresden, 1926

Nimzovich's maneuvers puzzled his contemporaries, and this game is a case in point (Qd7-f5-h7). The justification lies in the importance of the Black pawn on e4, which cramps the White position. It must be "overprotected," according to Nimzovich's *My System,* and any pieces engaged in such activity find themselves well-posted for later attack.

64. Capablanca–Spielmann, New York, 1927

New York, 1927 was Capablanca's greatest triumph, and may have contributed to overconfidence in his subsequent match with Alekhine—he won this quadruple round-robin by $3^{1}/_{2}$ points, ahead of Alekhine, Nimzovich, Spielmann, Vidmar and Marshall. He also received the first brilliancy prize for his victory over Spielmann, as he elegantly refutes Black's tactical defense at move 17.

65. Capablanca–Alekhine, 21st Match Game, Buenos Aires, 1927

When Alexander Alekhine challenged Capablanca for the World Championship, few observers gave him a serious chance to win. Capablanca had dominated the best players in the world at the New York 1927 tournament, and he had never lost six games in a decade, let alone in a single match. But Alekhine had subjected both Capablanca's games and his own to careful study, and he set out to surpass the Cuban in those aspects of the game in which he was strongest, maneuvering in simplified positions.

66. Flohr–Lustig, Prague, 1928

In the 1930s, Salo Flohr was the most successful tournament player after Alekhine, and in 1938 negotiations were under way for a world championship match. The events of the next few years—the collapse of Czechoslovakia, where he was virtually a national hero, and the suspension of international chess for nearly a decade—relegated him, like Rubinstein a generation before, to the realm of might-have-beens. Here he systematically demolishes the Black King's position, sacrificing a piece for each pawn, and slaughters the denuded monarch. This game was included by Hans Kmoch in his classic *Pawn Power in Chess* to illustrate the "sweeper-sealer." White's 23rd move simultaneously frees a square for his pieces and denies one to Black by forcing him to occupy it with a pawn.

67. Alekhine–Nimzovich, San Remo, 1930

In the years following his match with Capablanca, Alexander Alekhine dominated the international chess scene. He was not satisfied with winning a tournament by a small margin, but played every game with a fierce will to win. San Remo, 1930 was one of his greatest triumphs, as he won by a margin of $3\ ^{1}/_{2}$ points and would not agree to draws even in the final rounds. Here his artful use of pins reduces Nimzovich, who finished second, to virtual zugzwang in only 30 moves.

68. Sultan Khan–Capablanca, Hastings, 1930

It is rare when an unknown beats a former World Champion; rarer still when the unknown has only recently learned European moves! Khan flashed across the chess scene in the early '30s when his "master" brought him to England from India—and then he returned to oblivion. But not before outplaying some of the world's greatest.

69. Stahlberg–Alekhine, Hamburg, 1930

A brilliancy prize game, in which White's seemingly well-founded maneuvers on the Queenside are refuted by the opening of a file near the White King. For the serious student, it is notable that Black's combination centers on the apparently impregnable f3 pawn, at the intersection of the forces on the f-file and a8-h1 diagonal.

70. Spielmann–Eliskases, Match, 1932

One of history's greatest attacking players, Rudolph Spielmann, throws everything at the rising star Erich Eliskases of Austria. A Queen sacrifice caps a brilliant defense.

71. Lilienthal–Capablanca, Hastings, 1934-35

A rare tactical oversight by Capablanca. There is a (perhaps apocryphal) story that Lilienthal played Capa in a simultaneous exhibition as a boy. When he asked the great master for his autograph, Capablanca refused, and Lilienthal vowed to beat him one day with a Queen sacrifice.

72. Glucksberg–Najdorf, Warsaw, 1935

Polish-Argentinian Grandmaster Miguel Najdorf has had a long and remarkable career. Never lacking in self-confidence, he declared in 1947 that he would soon become world champion. Though his natural ability was perhaps the equal of that of any player in the world, he lacked the discipline and persistence required in the age of Botvinnik to reach the highest level. In this game, sometimes called the "Polish Immortal," Black strips bare the enemy King, finally sacrificing four pieces to drive him into a mating net.

73. Alatortsev–Capablanca, Moscow, 1935

At their best, Capablanca's games are models of clarity and precision. His instinct for proper placement of his pieces is most clearly demonstrated in his mastery of the endgame; in the middle game as well, he proves here the maxim that combinations flow from a superior position.

74. *Euwe–Alekhine, 26th Match Game, 1935*

The "Pearl of Zandvoort" was undoubtedly the most striking game of the 1935 World Championship Match, in which Max Euwe unexpectedly took the title from Alekhine. When White sacrifices a piece for three central pawns, Black must play for counterattack, but his own King proves to be too exposed.

75. *Reshevsky–Capablanca, Margate, 1935*

The American prodigy rose to the championship-contender rank with games like this in the 1930s. Here he strangles the former World Champion with adroit positional play, then makes a long King march to prepare the final combination.

76. *Fine–Grunfeld, Amsterdam, 1936*

Reuben Fine was one of the strongest players in the world in the 1930s; his best result was undoubtedly his tie for first with Paul Keres in the great AVRO tournament of 1938, in a field of the eight best players in the world. Unfortunately, he gave up serious play after World War II to pursue a career in psychoanalysis—yet he authored numerous chess books, chiefly *Basic Chess Endings* and the *World's Great Chess Games.* Here he defeats opening theoretician Ernst Grunfeld at his own game, refuting a system then considered favorable for Black.

77. *Keres–Euwe, Zandvoort, 1936*

Max Euwe held the World Championship for only two years—his good sportsmanship in granting his rival so early a rematch was widely admired at the time—and he has always been overshadowed by the towering figures of Alekhine and Botvinnik. But at his peak he was a very strong player indeed, and his best games are models of logic and precision. Here he thoroughly outplays Paul Keres, whose nervous attempt to break open the position is calmly refuted.

78. *Botvinnik–Tartakower, Nottingham, 1936*

Future World Champion Botvinnik wins a brilliancy prize game against the imaginative but erratic Tartakower. The attack beginning at move 20 is notable for the manner in which White closes the mating net with a series of "quiet" (non-checking) moves.

79. *Keres-Eliskases, Semmering-Baden, 1937*

A flashy early Keres masterpiece, which introduced the Wing Gambit deferred against the Sicilian Defense to master play.

80. *Euwe–Alekhine, 5th Match Game, Holland, 1937*

Although Alekhine regained the World Championship handily in 1937, the mathematician Dr. Max Euwe was a worthy rival, producing masterpieces like this in a losing cause. A slight opening advantage leads to a crisp middlegame with a Bishop trapped in an open board.

81. *Keres–Hromadka, Prague, 1937*

Hromadka pioneered the system of defense now known as the Modern Benoni, though it did not achieve real respectability until Tal took it up twenty years later. Here Keres demonstrates the danger of exchanging the Bg7—even if Black wins material in the process, his King position is not easy to defend.

82. *Botvinnik–Capablanca, AVRO, 1938*

The AVRO tournament of 1938, sponsored by a Dutch radio network, was a double-round affair among the eight strongest players in the world. It was widely considered a tournament to chose the next challenger for the world championship, but the European war soon made the question moot. The young masters Fine and Keres tied for first, well ahead of the "old guard" Alekhine and Capablanca. The most memorable game of the event was Botvinnik's victory over Capablanca. The "iron logician" systematically advances in the center, inviting his opponent to capture an irrelevant flank pawn. He caps his play with a brilliant "diverting" sacrifice at move 30.

83. *Fine–Flohr, AVRO, 1938*

The American Grandmaster, prolific author, and psychiatrist Reuben Fine has produced many sparkling games like this: sharp tactical play springing right out of the opening.

84. *Pleci–Endzelins, Buenos Aires, 1939*

A lesser-known masterpiece from the last pre-war Olympiad. With a flurry of sacrifices, White demonstrates that an advantage in development remains of decisive importance even after the exchange of Queens.

85. *Keres–Botvinnik, USSR Absolute Championship, 1941*

This event, a quadruple round-robin of the six best Soviet players, was held only once, and Botvinnik's triumph, $2^1/_2$ points ahead of Keres, would surely have established him as the challenger for the world championship had the war not suspended international chess activity. Here he scores a lightning victory over Keres, who puts too much faith in the result of an earlier game.

86. *Reshevsky–Vasconcellos, Boston, 1944*

By no means a typical game by Reshevsky, a player noted for dour maneuvering and resourceful defense. The explanation: Reshevsky had clinched first place in the U.S. Open with a round to spare, and was determined to have fun in his last game. When Black wastes time capturing the worth-less b2 pawn, White sacrifices a Knight to rip open the center and checkmates the defenseless Black King.

Many time U.S. Champion Samuel Reshevsky.

87. *Denker–Botvinnik, USA-USSR Radio Match, 1945*

The U.S. had dominated international team competition in the 1930s, and this postwar match was expected to be one-sided. So it proved, but in the other direction, as the Soviet team won $15^1/_2$- $4^1/_2$. This was the first board[6] encounter between the U.S. and Soviet champions.

88. *Geller–E. Kogan, Odessa, 1946*

Even at the beginning of his career, it was evident that Efim Geller was a player of great potential. He correctly assesses the myriad tactical possibilities as Black and White attack on opposite wings, and drives the Black King across the board with a relentless attack.

89. *Zita–Bronstein, Prague-Moscow, 1946*

The long-term impact of the post-war Soviet masters lies in their exploration of unbalanced positions—how much piece activity is worth a structural weakness? This period saw a renaissance of the King's Indian Defense, in which Black accepts a space disadvantage for tactical counterchances.

90. *Steiner–Botvinnik, Groningen, 1946*

Another example of the Stonewall Variation of the Dutch Defense, long a favorite of Botvinnik's. It is notable how quickly White is reduced to complete passivity after adopting an inferior plan at moves 11 and 12.

91. *Keres–Taimanov, USSR Championship, 1951*

In a critical last-round game, Keres selects an old-fashioned opening setup in which judgment and experience are more important than preparation, and he converts his space advantage into a slashing attack on the poorly defended Black King.

92. *Keres–Smyslov, Zurich, 1953*

This was a game of great sporting importance. Keres desperately needed a win to retain any hope of overhauling the tournament leader Smyslov. White finds an aggressive and original means of bringing both Rooks into the attack, but Black's careful defense and central counterattack carry the day. Smyslov went on to win the tournament and the right to challenge Botvinnik for the world championship in 1954.

93. *Botwinnik–Smyslov, 12th Match Game, Moscow, 1954*

This see-saw match reached a turning point in this game midway through. With both Kings under fire, Botwinnik drops the poison with 31. f7+, a combination worthy of a composed problem. The match was drawn, but it was clear that the title was vulnerable.

94. *Bronstein–Keres, Göteburg, 1955*

In this Brilliancy Prize game David Bronstein shows that his drawn match for the World Championship in 1951 was no fluke. Bronstein is famous for his innovative attacking combinations.

95. *D. Byrne–Fischer, New York, 1956*

Known as "the game of the century" until that title was usurped by a later Fischer brilliancy, this game saw the 13-year-old Bobby Fischer defeat one of the strongest American players with a startling Queen sacrifice. Though he did not win the tournament, it was already clear that Fischer was far ahead of his contemporaries, and he would soon overtake even the resilient Reshevsky.

96. *Tolush–Taimanov, Riga, 1958*

Alexander Tolush was one of those players who, though not quite of top rank, produced a slew of brilliant and original games in his career. In this game, the players attack on opposite wings, and it seems that Black's attack is quite as strong as White's. But Tolush nonchalantly sacrifices the exchange[7] to eliminate Black's best attacking piece, and threads his way through a maze of complications to take the win.

97. *Polugaevsky–Nezhmetdinov, Sochi, 1958*

Black drives the White King into a mating net in the center of the board with an amazing, intuitive Queen sacrifice. The game is more impressive than similar examples from the 19th century, for White's defense is by no means weak.

98. *Kholmov–Keres, Tbilisi, 1959*
When Black adopts a provocative defense that leaves his pieces scattered, White essays a long-term piece sacrifice to confine the Black King to the central files. The game is particularly impressive because of several variations in which White had to judge that his initiative would persist even after the exchange of Queens.

99. *Fischer–Benko, Bled, 1959*
A vintage Fischer brilliancy, as he makes the demolition of a top Grandmaster look easy with a precisely calculated Kingside attack.

100. *Tal–Smyslov, Bled, 1959*
Throughout the 1950s it seemed that the duel between Botvinnik and Smyslov would continue until the years took their toll on the older player. But then Tal arrived on the scene, and his imagination, daring and calculating ability brought him to the World Championship in 1960. In this game from the 1959 Candidates' Tournament he downs Smyslov with a sustained initiative and a flurry of combinations.

101. *Spassky–Bronstein, Leningrad, 1960*
In one sense, the most famous game of all—the final position appeared on the demonstration board in the film *From Russia with Love.* Both Spassky and Bronstein are imaginative players and afficionados of the King's Gambit. When Black thinks to gain time by attacking a Rook, White ignores it and launches a sparkling attack. In Russian, this game is known as the "Bluebird," but this doesn't translate well.

102. *Botwinnik-Tal, 17th Match Game, Moscow, 1960*
The Latvian whirlwind Mikhail Tal became the youngest champion in chess history (age 23) in 1960. To this day he remains one of the most inventive minds over the chessboard. In this key game, just when Tal's attack seems to have hit a wall, Botwinnik stumbles in time trouble and is overwhelmed with mating threats.

103. *Petrosian–Unzicker, Hamburg, 1960*
With his quiet positional style, Petrosian failed to excite the chess public as did the charismatic Tal, but at his best few could match his depth of conception. Here he paralyzes the Black position by controlling the only open file, then sets off on a long King march to prepare the decisive breakthrough.

104. *Keres–Bilek, Leipzig, 1960*
Black plays to undermine e5, and in so doing wins the pawn and falls behind in development—a typical opening for a player like Keres to pounce upon.

105. *Gufeld–Kavalek, Marianske Lazne, 1962*
A sharp opening leads to a remarkable setting, with a Bishop and swarm of pawns overcoming two Rooks.

106. *R. Byrne–Fischer, U.S. Championship, 1963–64*
Yet another "game of the century" by Fischer, who scored an unprecedented 11–0 in the 1963–64 U. S. Championship. Here he defeats Robert Byrne with a combination of such profundity that, at the very moment at which White resigned, both masters commenting on the game for the spectators believed that he had a won position.

107. *Bakulin–Bronstein, Kiev, 1964*
A typically imaginative game by Bronstein, who cleverly creates and then exploits weak squares near the enemy King. Black caps his positional play with a "diverting" sacrifice at move 27, the prelude to a decisive Rook sacrifice.

108. *Bronstein–Larsen, Amsterdam, 1964*
In the 1960s the Soviet chess hegemony was threatened first by Bobby Fischer and then by Danish Grandmaster Bent Larsen. Fischer's disagreement with reigning chess powers kept him out of world championship competition for a decade, but Larsen produced a series of tournament victories unmatched since Alekhine, including a tie for first with Spassky, Smyslov and Tal in the 1964 Interzonal. In this game, Bronstein adopts a very aggressive continuation against the King's Indian Defense, but Larsen combines defense and counterattack to take the point.

109. *Geller–Smyslov, 5th Match Game, USSR, 1965*
The "Hypermodern" masters of the 1920s and 30s showed that a large pawn center was not necessarily a source of strength, but could become an object of counterattack. Yet there is still a lot of truth in the older dynamics. Here Geller shows the strength of the classical pawn center, as he trades it for a winning Kingside attack.

110. *R. Byrne–Evans, U.S. Championship, 1966*
During the 1960s Larry Evans was one of the strongest U.S. players after Fischer. Evans was known as a "pawn-grabber" for his (well justified) faith in his defensive abilities. Robert Byrne lures him into a prepared line of the of the "Poisoned Pawn Variation," a risky but resilient defense in which

Black snatches a pawn at the cost of his development. The result is one of the most brilliant games of the decade.

111. Larsen–Petrosian, Santa Monica, 1966

Larsen's "Evergreen Game"—he thoroughly outplays the World Champion and caps his attack with a fine Queen sacrifice. Though Larsen finished third in this, the Second Piatigorsky Cup (behind Spassky and Fischer), he scored 2–0 against Petrosian and 1–1 against Fischer.

112. Nikolich–Fischer, Vinkovici, 1968

Another great game by Fischer, as he adroitly stymies White's Queenside play and sacrifices a piece to keep White's King in a box.

113. Lutikov-Taimonov, Moscow, 1969

In this final game of the USSR Championship, a special stake was riding on the outcome for Mark Taimonov. A clear victory would gain him a spot in the Interzonals, leading to the World Championship. In the middle game he goes all out for a quick kill, catching the White King in the center. It turns out that the victory isn't there, but in a flurry of time-trouble complications he winds up a piece down but six pawns up! One of the most exciting games on record.

114. Polugaevsky–Tal, USSR Championship, 1970

The Bishop sacrifice on h7/h2 is a rare bird in top-level competition, but here we see former world champion Mikhail Tal falling victim to a refined version. The game demonstrates the "transformation of advantages," as White trades space and material for time, advancing his central pawns with a sacrifice to obtain a winning attack. It also shows the level of preparation required of Grandmasters—Polugaevsky had examined the position arising at move 25 (!) in his pre-tournament analysis.

115. Duchess–Kaissa, Toronto, 1970

With this famous game chess computers became a part of chess lore. The formerly dominating program, the Russian version generated partly by Botwinnik, Kaissa ("goddess of chess"), is outplayed throughly by the American entrant. Suddenly the Russian computer seems to lose its head, dropping a rook for no apparent reason. The commentators are at a loss—until the discovery that Kaissa had seen a brilliant mating combination missed by everyone else! Kaissa still has to resign, but she has the honor of showing up the gallery.

116. Larsen–Spassky, USSR–Rest of the World Match, 1970

This 10-board match was won by the USSR team by the narrowest of margins, 20½–19½. Bobby Fischer began his drive toward the World Championship by defeating Tigran Petrosian 3–1 on board two, while Larsen faced Spassky on board one. Spassky's results as champion during this period were less impressive than as challenger, but here he meets Larsen's opening extravagance with classical development, and scores a quick knock-out.

117. Petrosian–Gligoric, Rovinj-Zagreb, 1970

It is when both sides play to win that the most exciting chess is produced. In this game, Gligoric offers a consistent and sound piece sacrifice, which should have only maintained the balance. Petrosian's attempt to hold on to everything results in his Queen being exiled to h1.

118. Stein–Lengyel, Moscow, 1971

Grandmaster Leonid Stein was a strong and imaginative player, particularly noted for his skill in attack. His unexpected death in 1973 at the age of 39 deprived the world of many fine games and a possible world championship contender. Here he demonstrates the power of the two Bishops, and the tactical dangers lurking in an apparently simple position.

119. Fischer–Spassky, 6th Match Game, 1972

Once the "sideshow" events had been put aside and he settled down to play chess, Fischer clearly demonstrated his superiority in his World Championship match with Boris Spassky. Many observers had suggested that Fischer's limited opening repertoire would prove his undoing (he had rarely begun with any move but 1. e4), but in this game he showed an equal mastery of a Queenside opening—the English.

120. Fischer–Spassky, 13th Match Game, Reykjavik, 1972

Surely one of the most entertaining games in championship history, with a fierce middlegame followed by a study-like ending. Boris appears to find a drawing continuation, but Bobby persists. With pawns threatening to queen on both sides of the board, Spassky makes the last slip.

121. Bronstein–Ljubojevic, Petropolis, 1973

One of the most exciting games of the "interregnum" between Fischer's retirement and the rise of Karpov. The meeting of two courageous tacticians produces a fierce battle in which both Kings are under attack.

122. N. Weinstein–DeFotis, Chicago, 1973

The Najdorf Variation of the Sicilian has long been one of Black's most popular defenses, for it leads to double-edged positions in which Black can play for a win as well as White. Fischer and Browne, among others, demonstrated the resources of the Black setup. But White inevitably began to show up weaknesses in Black's defenses. Here White scores a crushing win against Black's overrefinement (11...Rb8 and 12...Rg8), sacrificing Queen and Rook for an attack that leads to a winning endgame.

123. *Browne–Zuckerman, New York, 1973*

Perhaps the most successful American player of the post-Fischer era, Walter Browne from 1974 to 1983 won or tied for first in the U.S. Championship no less than six times. Here he shows the advantages of the "isolated Queen's Pawn" (open e-file, open diagonals for the Bishops, outpost square on e5) in a game described at the time as an "orgy of sacrifices."

124. *Karpov–Spassky, 9th Match Game, USSR, 1974*

Who would be Fischer's first challenger? Most pundits chose Spassky, for though his record as Champion had not been too impressive, his dominant play in the mid-sixties had not been forgotten. But in the second round of the Candidates' Matches he faced the youthful Anatoly Karpov, who advanced to the finals with remarkably mature play. Here he gives a textbook example of exploiting a small positional advantage against the Sicilian Defense.

125. *Portisch–Gligoric, Milan, 1975*

The format of the Milan 1975 tournament was an unusual one—a round-robin among 12 of the world's top players, followed by playoff matches among the top four finishers. Hungarian Grandmaster Lajos Portisch won the preliminary leg, but he lost the final match to Karpov $3^{1}/_{2}$–$2^{1}/_{2}$. In his game against Svetozar Gligoric, Portisch caps his strategic play with a series of finely calculated "interference" combinations. (See The Chessmaster's Tutor.)

Grandmaster Lajos Portisch.

126. *Geller–Karpov, USSR Championship, 1976*

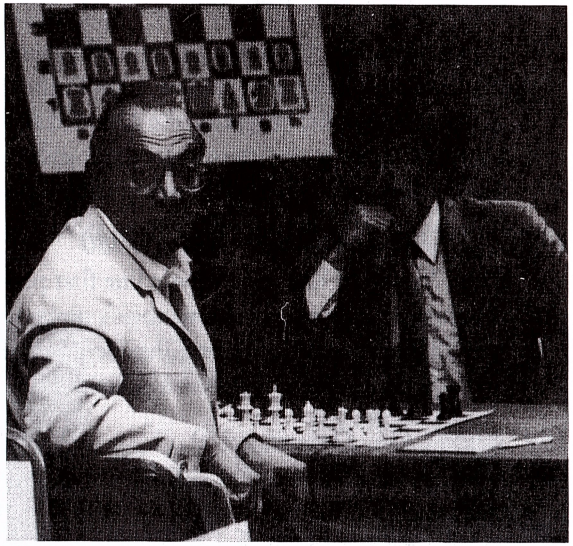
Anatoly Karpov once suggested that Grandmasters could be divided into "maximalists" and "minimalists"—those who try to find the best move in every position, and those who economize their time and effort to achieve the best tournament standing. Efim Geller belongs to the first group. One of the top Soviet Grandmasters since the early fifties, he has produced many, many fine games, and here he outplays the World Champion, concluding with a spectacular Queen sacrifice.

127. *Ljubojevic–Andersson, Wijk aan Zee, 1976*

When two players of contrasting styles meet, the result is a battle of ideas which can only enrich the game. Ljubojevic is one of the most dangerous attacking players of the modern era, while Ulf Andersson is one of the most difficult players to defeat. With a sharp pawn sacrifice, White places many practical problems before his opponent, and with the clock ticking, Andersson is unable to find the hidden path to the draw.

128. *Korchnoi–Polugaevsky, 7th Match Game, Evian, 1977*

Karpov's first challenger for the World Championship was Viktor Korchnoi. Korchnoi played under many handicaps: after his defection to the West in 1976, Soviet Grandmasters boycotted tournaments in which he competed, and it is difficult for any master to stay in top form without top-flight competition. Still, he came to the Candidates' Matches armed with many new ideas and a fierce will to win and scored decisive victories over Tigran Petrosian, Lev Polugauvsky and Boris Spassky.



Grandmaster Viktor Korchnoi (l.) and U.S. Champion Yasser Seirawan.

129. *Spassky–Korchnoi, 2nd Match Game, Belgrade, 1977*

The Winawer Variation of the French Defense leads to sharp, unbalanced positions requiring both strategic judgment and precise calculation. Long a favorite of Botvinnik, it is also very well suited to Korchnoi's counter-attacking style. In this game from his final Candidates' Match with Boris Spassky, Black sacrifices a pawn for the initiative, and the White King is unable to find a safe haven on either side of the board.

130. *Christiansen–Seirawan, Berkeley, 1978*

In the round-robins which predominate at the international level, every player plays every other, but in American "Swiss" tournaments (a large number of players compete with equal scores being paired in each round), a last-round game may mean the difference between a substantial prize and a long walk home. In this game, Seirawan gains a strategic advantage, but Christiansen launches a clever counterattack which leads to a King hunt and a very long discovered check[8].

131. *Timman–Karpov, Montreal, 1979*

The former World Champion's favorite game for many years. Here he launches a Kingside attack that appears to be flawed. Yet Anatoly has seen one move further, and with a dazzling Knight caper he transforms the game into a second King hunt.

132. *Adorjan–Ribli, 4th Match Game, Budapest, 1979*

Hungarian Grandmaster Andras Adorjan shows a fine tactical flair in prosecuting his attack against the denuded Black King. The use of an advanced passed pawn to support mating threats is not new, of course, but Adorjan adorns it with several witty and original points.

133. *Kasparov–Marjanovic, Malta, 1980*

The 17 year old Kasparov plays a line first played by Polugaevsky in his match against Korchnoi. Marjanovic's pieces congregate on the Queenside and Kaparov sends his to the Kingside. Marjanovic's Kingside pawns are no match for all of the pieces sent against them.

134. *Belle–Chess, Detroit, 1979*

At the American computer championship White plays a masterful game that even Karpov pronounced "very human." the breakthrough 44, e5! is worthy of a Grandmaster, but thereafter technique fails the machine and the endgame is drawn.

135. *Alburt–Peters, U.S. Championship, 1981*

In this brilliancy prize game from the 1981 U.S. Championship, Black's sharp exchange sacrifice produces a complex position with the struggle ranging all across the board, an example of the Modern Benoni at its best.

136. *Seirawan–Karpov, London, 1982*

A rare slip by Karpov in the opening allows Seirawan to win a piece, and he exploits his advantage precisely and energetically. This was the first tournament victory by an American over a reigning world champion since Dake defeated Alekhine at Pasadena 1932.

137. *Korchnoi–Kasparov, Lucerne Olympiad, 1982*

A titanic struggle. Karpov chose not to play in the match in which he would have to face his bitter enemy Korchnoi, and so the first board encounter was between the former challenger and the next one. Kasparov chose a sharp and risky piece sacrifice to stir up threats against the White King, and even Korchnoi's great defensive skills proved insufficient.

138. *Smyslov–Ribli, 5th Match Game, London 1983*

The old lion proves that he can still bite, as Vassily Smyslov, World Champion in 1957, crushingly defeats favored Hungarian Grandmaster Zoltan Ribli. Smyslov won the quarter-final Candidates' Match $6^{1}/_{2}$–$4^{1}/_{2}$, avoiding modern theoretical variations and relying on classical positions in which his greater experience gave him the edge.

139. *Beliavsky–Nunn, Wijk aan Zee, 1985*

Despite the vast amount of theory that has accumulated on the King's Indian Defense over the last 40 years, it is still possible for a creative player to produce an original game. John Nunn is one of the new generation of Grandmasters who have made England one of the world's leading chess powers (silver medal in the 1986 Olympiad, behind the Soviet Union). Beliavsky is one of the top Soviet players after Kasparov and Karpov.

LOND
SA
PRO
KASPAROV
KARPOV

Gary Kasparov (l.) and Anatoly Karpov at their first of three World Championship matches, in London, 1985.

140. Karpov–Kasparov, 24th Match Game, 1985

Once more a game in which the sporting factors outweighed the chess ones. After 23 games, Kasparov led by a score of 12–11, but a 12–12 tie would allow Karpov to retain the World Championship, and he had White in the last game. Kasparov remained true to himself, eschewing passive defense and once more adopting the double-edged Sicilian Defense. Karpov obtains an attack sufficient for a draw, but his attempts to obtain more lead only to a slashing counterattack and a decisive victory for the challenger from Baku.

141. Yusupov–Nogueiras, Montpellier, 1985

Even in a quiet Queen's Gambit, opening inaccuracies may meet with a drastic refutation. It is true that in closed positions maneuvering may be more important than rapid development—but you must be certain that the position will remain closed.

142. Rohde–B. Kogan, U.S. Championship, 1986

A brilliancy prize game by one of the best young American players. White's control of the center prevents the Black pieces from gathering to exploit the weakened position of the White King, and White makes use of the corollary of the doubled pawns[11]—an open file[12]—to prepare a sacrificial attack against the Black King.

143. Miles–Beliavsky, Tilburg, 1986

Here are two players who typify the modern Grandmaster: so well informed about the openings and so proficient in attack that their games are often decided in the middlegame. Trusting in opening theory, Beliavsky plays a solid line, but he is crushed by a prepared thunderbolt from Tony Miles. Starting at move eighteen Miles conducts an attack that cannot be parried.

144. Short–Ljubojevic, Netherlands, 1988

Though his results have been uneven, young British Grandmaster Nigel Short is considered by many the West's best hope to regain the world championship. After a tiny inaccuracy, he is able to sacrifice two pieces to smoke out the Black King and drive it all the way to h2 before administering the coup de grâce.

145. Seirawan–Tal, Brussels, 1988

In the early 80s Seirawan was closely associated with Tal's nemesis Viktor Korchnoi. In this game, he chooses a solid opening well-calculated to put the aggressive Tal off his game, and improves his record against the former world champion to 4–0.

146. Kasparov–Deep Thought, Exhibition, New York, 1989

The World Champion was invited to New York to face off with the world's leading main-frame computer program in a two-game exhibition at the Marshall Chess Club. The first game was a typical grandmaster crush, as Deep Thought was tied down to defense of the King pawn. In this, the second game, Kasparov opens the game up tactically and shows how a hesitant computer can be hung out to dry.

147. Kasparov–Karpov, 20th game, Lyon, 1991

Kasparov had announced that he wanted to prove himself a clear champion, yet at this late stage of the most recent match he was but a point ahead. In a variation of the Ruy Lopez already explored in this match, the champion decides on a hazardous course of Kingside attack that looks all the world like a swindle. But Kasparov presses on with one subtle threat after another, finishing with a simplification to a winning endgame. From a spectator's standpoint, this is perhaps the most exciting in world championship history.

148. Miles–de Firmian, Interzonal, 1990

Under the new program to qualify a challenger for the world championship, this single tournament in the Philippines produced seven contenders to join Karpov in a series of play-off matches. Former U.S. co-champion Nick de Firmian just missed qualifying, but had the satisfaction of winning the Brilliancy Prize with this game. From the beginnning Black looks for a slugfest against White's safe positional play. Black escalates the sacrifices until his opponent's "safe" play at a critical juncture is anything but safe.

149. Polgar–Christiansen, San Francisco, 1991

The Polgar sisters, Szusza, Sofia and Judit, from Budapest, have for a number of years defied the conventional wisdom that women cannot compete on equal terms with men. Their answer is results: at the age of 15 in 1991 Judit is an eyelash from becoming a Grandmaster. At the 1990 Olympiad, the Hungarian women's team did the previously impossible: took first place above the Soviets. That team consisted of the three sisters plus one! Szusza, the oldest of the trio and more experienced in tournaments, won the Brilliancy Prize for this relentless Kingside attack at the PanPacific tournament in 1991. The combination begining with d5! pays off in a forceful ending.

150. Christiansen–Nunn, Munich, 1991

A growing trend is the participation of foreign Grandmasters in the traditional team matches in Germany. Former U.S. champion Larry Christiansen now lives in Germany for this and for the opportunity to compete more frequently in European events. The most impressive result of an American player in years was Christiansen's clear first at Munich over an exceptionally strong field. In this game typical of his style, Larry unleashes a fierce attack that swings from the center to the King's wing, finally resulting in a subtly won endgame.

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1 +45=13–27 is shorthand for 45 wins, 13 draws and 27 losses.

2 A *tempo* is the gain of a move over the opponent, who "wastes" a move in gaining material or moving a piece twice.

3 The Hypermoderns were a group of masters who rebelled against the dogmatism of Tarrasch (who taught that the center must be occupied by pawns) and demonstrated the power of counterattack against an immobile center.

4 *Zugzwang* refers to a situation in which a player would be all right if he could "pass," but any move he makes will lead to disaster.

5 In most tournaments, a *brilliancy prize* is awarded for the most spectacular win.

6 In a team match, players are paired generally in order of strength. The first board is the game between the highest-rated player on each team.

7 The *Exchange* is the trade of a Rook for a minor piece (a Knight or Bishop). The Rook is more valuable (see p. 7).

8 A *discovered check* is made by opening a line of Bishop, Rook, or Queen by removing a piece from the line.

9 Doubled pawns are two pawns of one color on the same file. They are usually a weakness.

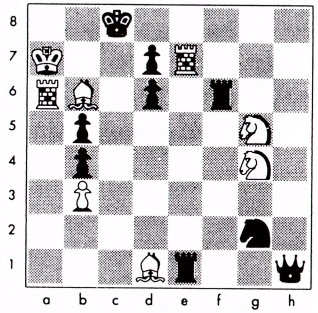
10 An open file is a file which is not blocked by any pawns. It can provide a path of attack for a Rook or Queen.

BRAIN TEASERS

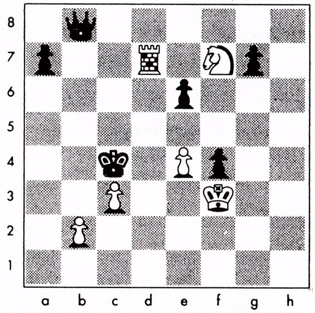
These ten problems and studies are designed to introduce you to the field of chess composition.If the problem calls for White to play and mate in a number of moves, then you must find the move for White that will force checkmate of Black in that number of moves against the best defense. (Note how this is abbreviated in positions 3–10).

If the problem calls for White to play and win, then you must find the line for White that leads to an overwhelming advantage, such as the win of a piece, or a passed pawn that cannot be prevented from Queening.

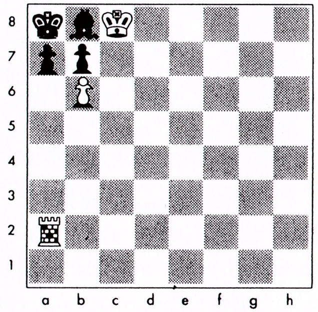
The solutions to the problems and studies begin on page 67. These classic positions may also help you in the tactics of chess, but their primary purpose is art—and fun. To test your tactical abilities, or to establish your proper level of play against Chessmaster 3000, be sure to explore Chess Rater on your disk. For pure instruction, be sure to explore Chess Tutor on your disk.



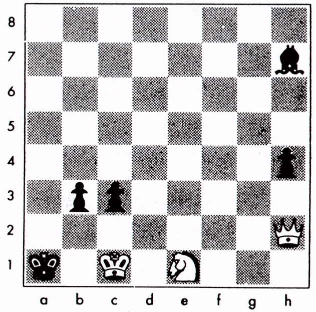
1. Problem by D. Densmore, 1916
White to move and mate in 4



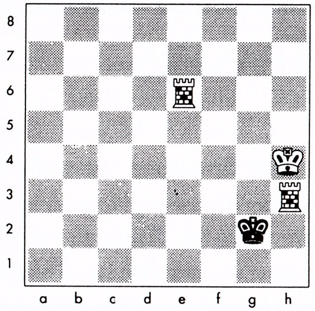
2. Endgame Study – Troitzky, 1914
White to move and win



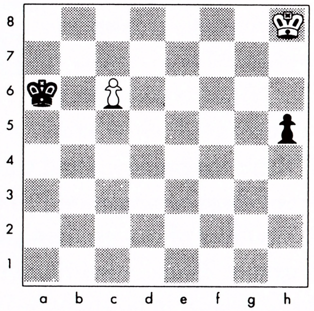
3. Paul Morphy, 1856
Mate in 2



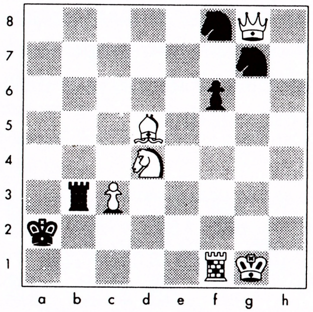
4. Paul Keres, 1936
Win



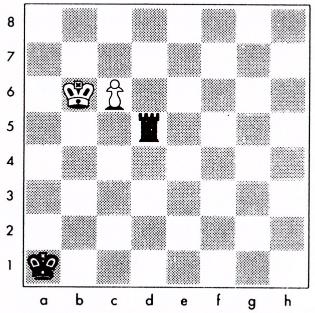
5. William Shinkman, 1877
Mate in 3



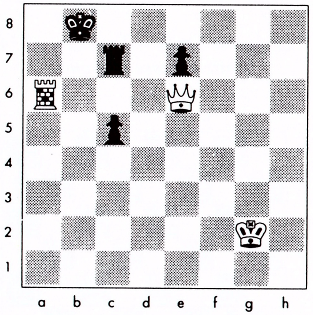
6. Richard Reti, 1921
Draw



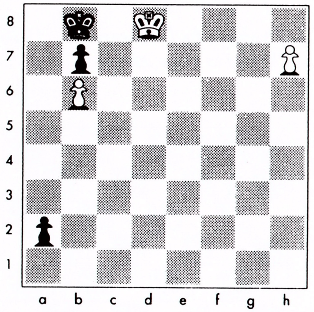
7. Brian Harley, 1911
Mate in 3



8. Francisco Saavedra, 1895
Win



9. Otto Wurzburg, 1909
Mate in 3

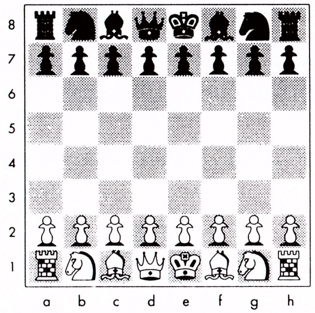


10. David Joseph, 1922
Win

ALGEBRAIC NOTATION

There are two main shorthands for writing down chess moves. One is descriptive notation. Once the most popular, it is the basis of most older books. Descriptive locates squares from each player's side of the board, by the original position of the piece. The solutions to the Brain Teasers (and all the moves in this collection) are written in algebraic notation. Here's how to read it:

The columns of the chessboard, called *files,* are lettered a through h. The rows, called *ranks,* are numbered 1 through 8, like this:



Each square is referred to by its file and rank. For example, the White King is on e1.

Each piece is referred to by a letter:		
	King	K
	Queen	Q
	Rook	R
	Bishop	B
	Knight	N

There is no symbol for a pawn; it is referred to by the absence of a piece letter.

A move is described by the move number, the piece moving, and the square it moves to. For example, from the starting position in the diagram above, the moves 1. Nf3 d5 mean that on move 1 White moves a Knight (N) to f3, and then Black moves a pawn (no piece letter) to d5.

The move 4...d5 means on move 4 Black moves a pawn to d5; the "..." tells you that White's move number 4 is not shown.

In all these examples, the move is clear because there is only one piece of the type called for that can move to the destination square. But sometimes two identical pieces can move to the same destination square. In that case, the correct piece is indicated by the rank or file the piece starts from. For example, Nef5 means the

Knight on the e file moves to f5.

If a capture is made, the letter x appears before the square: Bxg6 means a Bishop captures on square g6.

Other symbols also required are:

O-O	Castles Kingside
O-O-O	Castles Queenside
+	Check
++	Checkmate
Q	Promotes to Queen
ep	En passant
!	Good move
!!	Surprise move
?	Poor move
??	Blunder
!?	Interesting or paradoxial move

In the solutions to The Brain Teasers, bold type is used for the moves in the problem solution and light type for other possibilities being discussed.

SOLUTIONS TO BRAIN TEASERS

1. *Problem by D. Densmore, 1916*

White to move and mate in 4.

Composed problems are a world quite apart from practical play; aesthetic principles govern, as every piece must be needed, and ideally every variation should be thematically related to the main idea.

Here the idea is a "Plachutta interference" – two Black pieces defend against two threats, their lines of action intersecting on a critical square. By sacrificing a piece on that square, White forces one of the Black defenders to occupy it and "interfere" with the other.

After the key move, 1. Ra2, White threatens 2. Rc2++. Black has several defenses:

i) 1...Rf2 2. Be2
  a) 2...Rfxe2 3. Re8+ Rxe8 4. Rc2++
  b) 2...Rexe2 3. Rc2+ Rxc2 4. Re8+

ii) 1...Qf1 2. Be2
  a) 2...Qxe2 3. Re8+ Qxe8 4. Rc2++
  b) 2...Rxe2 3. Rc2+ Rxe2 4. Re8++

iii) 1...Qh7 2. Ne4
  a) 2...Qxe4 3. Re8+ Qxe8 4. Rc2++
  b) 2...Rxe4 3. Rc2+ Rc4 4. Re8++

iv) 1...Rf5 2. Ne5
  a) 2...Rfxe5 3. Re8+ Rxe8 4. Rc2++
  b) 2...Rexe5 3. Rc2+ Rc5 4. Re8++

v) 1...d5 2. Ne6
  a) 2...Rexf6 3. 3Rcz+Rc6 4. Re8++
  b) 2...Rfxe6 3. Re8+ Rxe8 4. Rc2++

2. *Endgame Study, Troitzky, 1914*

White to move and win.

Endgame studies differ from problems in that they do not lead to a mate in a specified number of moves, but to a winning position by means of a forced maneuver.

The theme of this study is domination of the Black Queen by the two

White pieces. 1. Rb7 Qg8 We can quickly dismiss 1...Qxb7/c8/e8 2. Nd6+. Squares attacked by the Knight or Rook are obviously out, leaving a8, f8 and g8. 1...Qf8 fails to 2. Ne5+ Kc5 3. Nd7+, and 1...Qa8 to 2. Ne5+ Kc5 3. Rb8 Qxb8 . 4. Nd7+. 1...Qg8 seems safe, but 2. Ne5+ Kc5 3. Rb8 Qh7. Again, 3...Qxb8 loses to 4. Nd7+. Though the Queen seems to be out of the box... 4. b4+ Kd6 5. Rh8 and the Queen is trapped – 5...Qxh8 6. Nf7+ wins.

3. *Paul Morphy, 1856*

Paul Morphy supposedly composed this at age 9, but it did not appear until 10 years later in a New York newspaper. He never disowned it! It exhibits a desirable feature in a problem—a striking first move (key), whereas an ending (study) need not reveal its surprise element until later. Note that in problem parlance key moves are usually designated with an exclamation point, whether they're surprising or not. (Close "tries" are shown with a question mark.)

1. Ra6 blocking Black's only safe move, a6: ...bxa6 2. b7++

4. *Paul Keres, 1936*

How can White prevent b2+?

1. Nc2+! This truly deserves the exclamation point, but you must also be able to see 1...Bxc2 2. Qb8! and the b pawn is stalled because White can reply 3. Kxc2 to 2...b2+, and mate is threatened on the a file. ...Ka2

2. Nb4+ Kal (...Ka3 allows 3. Nd3 Bxd3 4. Qd6+)

3. Qa2+!! (two exclamations for this shot) ...bxa2

4. Ne6! and there is no way to prevent Nd4 and mate at b3 or c2.

5. *William Shinkman, 1877*

Chess problems derive their appeal many times from simplicity rather than complexity. In any case, there must be one and only one correct response to each Black defense:

1. Rh1!	Kxh1	2. Kg3
	Kf2	2. Kh3
	Kf3	2. Rh2

6. *Richard Reti, 1921*

How can White catch the pawn? Only by steering a path that also threatens to force his own pawn to queen:

1. Kg7! h4 2. Kf6 h3 3. Ke6! and the c Pawn queens
2. ...Kb6 3. Ke5! Kxc6 4. Kf4 catches the pawn!

Richard Reti was that rare mixture of Grandmaster, theorist, and composer.

7. *Brian Harley, 1911*

The Bishop must move somewhere along the a8-hl diagonal to threaten 2. Qxb3, but where?

1. Bhl! Paradoxical, but required by the need of the whole diagonal by the Queen:

...Nge6 2. Qg2+ Rb2 3. Qa8++
...Nfe6 2. Qa8+ Ra3 3. Qg2++

8. *Francisco Saavedra, 1895*

The most famous study of all; each move is precisely dictated:

1. c7! Rd6+ Black must continue to check, noting that the White King cannot go to b7 because of Rd7, nor to the c file because of Rdl, threatening to "skewer" the King and queening pawn.

2. Kb5 Rd5+

3. Kb4 Rd4+

4. Kb3 Rd3+

5. Kc2 ... It would seem the checks are over, but Black has a last poisoned dart:
5...Rd4! so that, if the pawn queens, Rc4+! forces a stalemate after 7 Qxc4. Therefore:
6. c8(R)! This "under-promotion" prevents the stalemate, but how to win?

6. ...Ra4 Preventing Ra8+ and mate, but now:

7. Kb3! Winning, since both the Rook and mate are threatened. An ending made in heaven.

9. *Otto Wurzburg, 1909*

Before you check, think!

1. Qe5! The Black rook now "self blocks" the king in trying to prevent the threatened mates at a8:
...Ra7 2. Qd8+ Kb7 3. Rb6++
...Rd7 2. Qa8+ Kc7 3. Rc6

These mates are said to be "echoes" because they have a similar configuration on different squares.

10. David Joseph, 1922

Both sides queen, but the Black Queen is immune because of stalemate if captured. To win White must find a way to discover check with the King:

1. h8(Q) al(Q)
2. Qg8! Easy does it! If 2. Qe8 at once, a devastating move, Black answers Qg7, keeping the White king immobile. 2...Qa2
3. Qe8!... Qf8 never works because of Black's reply Qa3. 3...Qa4
4. Qe5+ Ka8
5. Qh8! and now the Black Queen cannot challenge any more because White captures, this time, with check.

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